DIFFERENCES BETWEEN GEOGRAPHICALLY MOBILE AND NONMOBILE FIFTH-GRADE STUDENTS ON ACADEMIC, SOCIAL, AND EMOTIONAL DIMENSIONS

By

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In memory of my father,
the original Dr. Dovell

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This study investigated differences between mobile and nonmobile fifth-grade students. These students were examined in terms of reading achievement, school adjustment problems, peer relationships, attendance, placement in exceptional student education (ESE) classes, and attitude toward school.

Of the 16 eligible public elementary schools in Alachua County, Florida, school personnel and students at 13 schools participated. The counselor in each school generated a list of nonmobile students--those who had attended only one elementary school--and mobile students--those who had attended three or more schools. Parent permission letters were sent to the families of 504 students. Of these, 54% or 274 were returned. This yielded a sample of 143 nonmobile and 131 mobile students.

Through a review of records, race, sex, socioeconomic status, family structure, attendance, placement in exceptional student education, and reading achievement scores were obtained. The mobile students were classified into two categories--mobile-in-county (attendance at three or more schools in Alachua County) and mobile-out-of-county (attendance at three schools with at least one located outside Alachua County). Teachers rated each participating student in their respective classrooms, assessing school adjustment problems. Students completed instruments on school attitude and peer relationships.

In order to remove the effects of the moderator variables from those of the main independent variable, mobility, multiple analyses of regression were calculated for each dependent variable. The moderator variables were entered into the regression equation first, saving mobility for last. These calculations showed that mobility alone was not a significant predictor of the dependent variables in every case but one. Mobility was related to student placement. Mobile children (out-of-county) were more likely to be placed in ESE rather than gifted classes.

On the basis of this study, it appears that mobility alone is not a significant factor in the school success of fifth-grade students, especially as related to reading achievement, school adjustment problems, peer relationships, attendance, and attitude toward school. If mobility is a factor, it is likely to be associated with other variables.

CHAPTER I
INTRODUCTION

Families in the United States have the highest rate of geographical mobility of any country in the western world. People often change residences, many within the same community. Others move thousands of miles across the nation to new communities which may differ in size, customs, and climate. Regardless of the distance, mobility is a facet of society which has an impact on the education of young people.

Approximately one in five families moves each year (Shumaker & Stokols, 1982) and the average American lives at 14 different residences in his lifetime (Bogue, 1985). According to the U.S. Bureau of the Census (1974), approximately 6 million children between the ages of 5 and 13 change addresses yearly. This means that 20% to 30% of the children enrolled in public schools each year transfer from one school to another (Felner, Primavera, & Cauce, 1981). With very few exceptions, it appears that children in elementary schools are affected by mobility--either through actually transferring, having a friend move away, or making a new acquaintance of the child who moves into the community.

The roots of mobility might be traced to the early history and character of our ancestors. America was populated by immigrants who were willing or were forced to leave their nations of birth. Some saw immigration as a means of escaping oppression. Others saw it as a challenge and a way to achieve success. Mobility often offered hope.

The early colonizers arrived on the coasts of the United States, creating large population centers in the east and northeast Atlantic Regions. The desire for upward social or economic mobility often meant geographical mobility as well. Before long, major streams of people were migrating to the midwest and then on to the far west, as Americans continued to demonstrate a willingness to move in order to obtain a better life. Then, other patterns began to appear.

From 1865 until 1950 many people moved from the southern states to the north and north central metropolitan areas. However, between 1950 and 1980 the northern states suffered net migration losses. Southern states no longer lost population to the north; southerners either remained in their home region or moved westward. Additionally, migrants from the north and north central regions moved south and southwest (Bogue, 1985).

Another mobility pattern was the movement from the rural to urban areas. In 1900, two of every three Americans lived in rural surroundings (Conger, 1981). From 1900 to 1920, the central cities grew the fastest. After 1920, the suburban areas experienced the largest gain in population (Shumaker & Stokols, 1982).

The 20% annual mobility rate, though differing in patterns, has remained relatively stable throughout America's history. It was thought at the time of the settling of the west that, once these lands were inhabited, Americans would settle down, send out roots, and remain in one place. This did not prove to be the case. The "American Dream"--the attainment of better opportunity--seemed to require moving.

This migratory nature was seen by some as an "unfavorable trait in the American character" (Long & Boertlein, 1976, p. 84). Commentators became concerned that personal liberty and advancement were linked to the loss of humane values and social stability--with all produced by incessant movement (Kopf, 1977). This negative imagery has continued in the writing of popular sociologists such as Alvin Toffer (1970) and Vance Packard (1972). These writers bemoan the negative consequences of large numbers of families moving from place to place, having no ties or commitments to community.

More recent authors have reported more benign views of mobility. Shumaker and Stokols (1982), for example, see relocation as the natural consequence of the changing needs of households. Brett (1982) and Bowlby (1980) reported feelings of grief and loss as people left one community for another. These reactions were seen as proof of attachment to local environments.

People move to a new location for a variety of reasons. The United States Department of Labor (1977) reported that the predominant reason for moving concerns the employment of one of the parents. Lansing and Barth (1964) wrote that the threat of unemployment or a search for steadier employment was the reason for moving in about 20% of the cases. Relocation for promotion was undertaken by about 17% of those studied. Mentioned by 26% as the impetus for moving included the desire to move closer to other family members, health reasons, and death of a person in the family. Or, in some cases the desire may be to move away from someone, as in divorce.

When families move, there is likely to be a transition period that requires adaptation (Sloan, Jason, & Bogat, 1984). Recent research (Brammer & Abrego, 1981; Schlossberg, 1984) on life events or life transitions has shown that during these times people experience increased psychological impairment. In addition, the relationship between life changes and stress has been linked to deteriorated physical health, as well as psycho-social problems.

Marshall and Cooper (1976) reported that family separations that are caused when one parent is transferred to a job in another location are crisis events in a marriage. Brett and Werbel (1980) found that 85% of the 350 families they studied were separated for more than eight weeks. This means that the spouse who remained at home assumed additional duties such as selling the house, and terminating community and economic ties, in addition to the additional responsibilities associated with parenting.

Some recent studies (Duncan & Perucci, 1976; Gilliland, 1979; Levin, Groves, & Lurie, 1980) described problems encountered by a wife when her husband is transferred to a new job and community. Among the concerns were the loss of established support networks and decreased career advancement and employability.

Another consequence of relocation can be isolation from an extended family. Parents and their children can lose a source of help in both material and emotional matters. The lack of assistance in child care might be a critical deficit. Social and informational support once provided by family members usually decreases.

Other challenges confront mobile families. Appropriate housing must be found when relocating. Many times there are also difficulties experienced in selling former residences. Acceptable shopping areas, civic organizations, churches, and services must be found.

There are many problems connected with moving which face children in particular. Some of these concerns affect the children's education. Often before a move, children experience the family tension as the parents struggle with the decision about whether or not to relocate. Children can feel powerless, especially when a critical decision is made without their opinions being heard (Beem & Prah, 1984). In fact, in many cases, children are not informed until the time that the actual move is being made (Levine, 1966).

For a sizable number of families, moves are made in relation to economic difficulties and/or family dissolution. During these times, the quantity and quality of parental attention to children decreases markedly. For example, parents must sometimes work longer hours or take additional jobs to earn sufficient salaries to support the family. After a divorce, mothers who previously did not work outside the home often need to find employment. During these times of economic and psychological upheaval, parents may not have the time or emotional resources to effectively nurture their children.

Another common occurrence is a move made to combine two formerly separate groups into a blended family. This new family is made up of spouses who remarry and their children from previous marriages. The realignments of loyalties, family hierarchy, and even spatial allotments in the new home can be extremely anxiety producing for children.

Leaving friends in the neighborhood and at school can be quite difficult for mobile children (Bekins, 1976; Bush, 1977). The separation and loss process has just begun to be explored and understood (Bowlby, 1980).

Very few schools have any kind of organized procedure to assist transferring students as they leave (Sloan, Jason,

& Bogat, 1984). Other than preparing a one-page withdrawal form, little attention to helping children prepare for a new situation is typically given at this time. In quite a few instances, the school does not know that the family is moving until after the fact (Levine, 1966).

Formal school orientation procedures for new families are carried out by a very small percentage of schools. Many schools which have orientation sessions at the beginning of the school year do not continue them throughout the school year and new students who enter are often expected to orient themselves to their new surroundings. Some information about the school, such as physical layout, cafeteria procedures, dress code, and other school rules may not be fully explained to new students (Sloan et al., 1984).

Unfamiliarity with the environment can be particularly frightening for a young mobile child. This situation is magnified when the move is from one area to a very dissimilar one, perhaps from a rural to a metropolitan region (Panagos et al., 1981). Becoming familiar with an elementary school campus might seem overwhelming. To young children, the location of the main office, bathrooms, the cafeteria, and the health clinic may be confusing.

Other school related needs of mobile students are also significant. Moore (1981) stated that these children need to have (a) information concerning the school, (b) records from the previous school processed quickly, and (c) special support from school personnel. The initial registration process that an entering family is faced with is frequently ineffective in meeting these needs.

When records from a former school are late arriving or are in some way inadequate, mobile students can be adversely affected. Special class placements are delayed and academic interests and needs may not be met. deNomme and Wells (1981) maintained that mobile students are sometimes placed in exceptional student education (ESE) classes unnecessarily. The authors described the way in which receiving school personnel often mislabel mobile students who have experienced an interruption in their education. Instead of understanding that these students often suffer from a lack of sequential education experiences, many school officials tend to diagnose problems related to mobility as learning disabilities (deNomme & Wells, 1981).

It appears that when children enter a new school, disruption in their academic process can occur. Placement testing must be administered in order to determine skill levels. Since different districts (and sometimes different schools within a district) use various academic texts, some children fall behind the majority of their peers, or others repeat already mastered skills merely because of a differing sequence of presented material from one school system to another.

A few studies have shown that moving affects academic achievement adversely. Kealey (1982), for instance, reported that students who remain in a school have a clear advantage over mobile students in achievement of reading and math skills. Levine, Wesolowski, and Corbett (1966) found that the more often children changed schools, the poorer their grades. On the other hand, Perrodin and Snipes (1966) and Bourke and Naylor (1971) wrote that mobility had few clear-cut and significant ill effects on achievement. What is the explanation for these seemingly contradictory results? Some writers have suggested that there were intervening variables which influenced the outcomes.

Lacey and Blane (1979) argued that researchers must examine the reasons for mobility. Other factors which should be considered are social class and the students' achievement before the move, the distance moved, sex, race, and ability (Felner et al., 1981; Goebel, 1981).

The psycho-social impact of mobility on children has been described but rarely studied in an organized fashion. Crabbs and Crabbs (1980) asserted that children who move often become anxious, fearful, withdrawn, and dependent on their parents. They frequently feign illness and display other defensive behaviors. Bowlby (1980) compared the effects of moving to the experience of death and grief.

Social relationships seem to suffer when children move. Rakieten (1961) showed that in a sociometric study, at least one-third of the highly mobile students were isolates. Mobility for children was associated with difficulty in giving up old relationships and beginning new ones (Brett, 1980). Kantor (1965) wrote that teachers rated mobile children as less well adjusted than nonmobile children.

Yet, there can be some advantages for children when families move. Different localities may offer new opportunities for the parents' career advancement and an improvement in the family's economic status. The chance for unique and stimulating leisure activities could increase. Mann (1972) studied college students and found that males who had experienced a mobile childhood had a greater intellectual orientation, placed more value on autonomy and independence, and were more adaptable to complex environments than lower mobility males.

Need for the Study

There is very little research available in which information about moving was collected directly from children. More information is needed about the association between mobility and school achievement. There is also a need for information that is objective and based on standardized measures. Students' attitudes towards school are presumed critical to academic success. However, the extent to which mobility can be considered a factor in students' attitudes toward school is in question. Because moving from one school to another involves an obvious interruption in the social relationships of students, there is a need for empirical data to ascertain any significant differences in the peer relationships of mobile and nonmobile students. Students' behavior and adjustments in relation to mobility are also pertinent dimensions for study.

If there are differences between mobile and nonmobile students, parents and teachers could be alerted. Interventions could be designed to assist children who are exiting from and entering schools. The school community could be sensitized to the concerns of this large segment of its population.

Purpose of the Study

The purpose of this study was to investigate the differences between mobile and nonmobile public school students in terms of reading achievement, peer relationships, school attitude, school adjustment, attendance in school, and placement in exceptional student education classes.

Research Questions

Students who attend only one school, the nonmobile children, may have different perspectives than do the mobile students, who attend three or more schools. Although some of these differences are more apparent than others, there are still many areas concerning mobility which have not been thoroughly explored. This study focused on the following research questions:

1. After removing the effects of race, socioeconomic status, sex, and the marital status of parents, to what extent can the variation in reading achievement be attributed to mobility?

2. After removing the effects of race, socioeconomic status, sex, and the marital status of parents, to what extent can the variation in school adjustment problems be attributed to mobility?

3. After removing the effects of race, socioeconomic status, sex, and the marital status of parents, to what extent can the variation in peer relationships be attributed to mobility?

4. After removing the effects of race, socioeconomic status, sex, and the marital status of parents, to what extent can the variation in school attendance be attributed to mobility?

5. After removing the effects of race, socioeconomic status, sex, and the marital status of parents, to what extent can the variation in participation in exceptional student education classes be attributed to mobility?

6. After removing the effects of race, socioeconomic status, sex, and the marital status of parents, to what extent can the variation in students' attitude about school be attributed to mobility?

Definitions

For the purposes of this study, the following terms were defined.

Mobile student. A mobile student is an elementary school student who was enrolled in and attended three or more elementary schools. A student who attended three or more schools all in Alachua County, Florida, was described as an in-county mobile student. A student who had attended three or more schools with at least one located outside Alachua County was described as an out-of-county mobile student.

Nonmobile student. A nonmobile student is an elementary school student who attended only one elementary school since first enrolling in school at age five.

Reading achievement. Reading achievement refers to a student's performance on a standardized reading achievement test.

Peer relationships. Peer relationships refers to the friendships and associations a student has with other students at school.

School adjustment problems. School adjustment problems are concerns regarding a student's perceived ability or lack of ability to satisfactorily respond to the personal, interpersonal, and academic stimuli of the school environment.

Attitude about school. Attitude about school refers to one's perceptions or beliefs about school.

School attendance. School attendance is defined as the number of days absent from school during the first five six-week grading periods.

Placement in exceptional student education. Placement in exceptional student education classes is defined as assigning a student into classes or programs serving children with special educational needs. Exceptional student education programs are for the specifically learning disabled, emotionally handicapped, educably mentally retarded, or speech or language impaired. They can also include special arrangements for academically gifted students.

Mobility. Mobility refers to the movement or relocation from one place of residence to another, which in turn affects a change of schools for a child.

Organization of the Study

The remainder of this study is organized into four chapters. The second chapter contains a review of the relevant literature. The third chapter is a description of the methodology: population, sample, research design, hypotheses, instrumentation, data collection procedures, and the analysis of the data. Chapter IV contains the results of the study. The fifth chapter is devoted to a summary, conclusions, implications, and recommendations for future research.

CHAPTER II
REVIEW OF LITERATURE

Whatever the motivating factors, mobility from one residence or community to another is a stressful family experience. Children are probably affected in many ways. A review of the professional literature can be helpful in describing how mobility influences the educational progress and personal growth of young people.

Approximately 10% to 15% of the people in the United States will live their entire lives in the county of their birth (Bogue, 1985). Only 2% to 3% of the population will spend their adult years in the same house or apartment. They are generally nonmobile and have become an exception to typical patterns in a highly mobile society.

Every year approximately 20% of the people in the United States move from one residence to another. Most of the moves these 40 million Americans make are within their county of residence. However, about 14 million persons move longer distances. During his or her lifetime, the average American will live at 14 different residences.

Compounding this internal movement of people, about 1,300,000 persons enter the United States each year from abroad. This number is unparalleled worldwide (U.S. Bureau of the Census, 1981).

According to Bogue (1985), demographers differentiate between two types of residential mobility. The term, "local mobility" refers to the changing of residence from one part of a community to another in the same area, such as a city or county. "Internal migration" connotes the changing of residence from one community to another within the nation, or from county to county or state to state. Thus, a migrant moves from Duval County to Dade County in Florida or perhaps from South Carolina to Georgia. A local mover changes residence within the same county, perhaps moving across the city. Both of these kinds of mobility are important, as children change school zones or school districts to accommodate the families' relocation.

Migration can alter the size or composition of a group of people rather quickly. This can happen after a mass exodus of people, a mass invasion of people, or a large interchange of people. Migration generally involves the cutting off of economic and social ties with an old community and adjustment to a new job, a new set of community standards, and a new social network (Hunsicker, 1981). Because these changes are more dramatic and evident, migration has been studied more closely than local moving.

However, local mobility can alter the internal distribution of population within a community. It can cause neighborhoods to change quickly and substantially. For this reason, local moving is now receiving more attention by researchers.

From 1947 to 1982, the percentages of nonmobile, locally mobile, and migratory persons changed very little. Reports from the United States Bureau of the Census (1966, 1975, 1981, 1984) indicate that the rate of local mobility declined from 13% in the 1950's and 1960's to 10% in the 1980's. The rate of internal migration has remained at about 6% to 6.5% annually. Approximately 50% of the 14,000,000 migrants move from one state to another. Immigrants from other countries account for 0.6% of the population, which is double the rate of 30 years ago. When five-year intervals are considered, instead of measuring one-year periods, trends and changes can sometimes be better defined. The mobility rates do not increase by a factor of five, however, because persons who move several times with the five-year span are counted only once. A large part of all mobility is created by a group of persons who move frequently (Levine, 1966). Almost 50% of Americans are mobile over any five-year interval, and more than 20% are migrants, either internal or from other countries. Over a period of one lifetime, mobility involves almost everybody (Bogue, 1985).

Historical Trends

Historically, America has always had the image of a highly mobile society. In 1830, Alexis de Tocqueville described the typical American as preferring to be on the move:

> In the United States a man builds a house in which to spend his old age, and he sells it before the roof is on; he plants a garden and lets it just as the trees are coming into bearing; he brings a field into tillage and leaves other men to gather the crops; he embraces a profession and gives it up; he settles in a place which he soon leaves to carry his changeable longings elsewhere. (cited in Long & Boertlein, 1976, p. 25)

There are little specific data concerning mobility before 1920. It was at that time that registered information became available on a national level. It was not until the census of 1940 that direct questions on mobility were asked (Shumaker & Stokols, 1982).

The early movement of Americans has been attributed to expansion and settlement of frontier areas. Shumaker and Stokols (1982) wrote that, in 1850, the superintendent of the census predicted that after the territories were settled, mobility rates would decrease. Through studies of particular communities and other historical writings, however, it has been determined that from 1800 on, the mobility equalled the current mobility rate of 20% (Kopf, 1977; Long & Boertlein, 1976). It is because of the continued numbers of families who make short distance moves that the expected decline in mobility rate never occurred.

The long distance moves of families show different patterns. During the eighteenth and nineteenth centuries, Americans moved from the more densely populated east to the midwest to the far west. Then, once these areas were settled and industrialization began, the rural to urban population shift took place. Economic advancement expanded in the cities while the number of jobs diminished in the rural areas.

Between the end of the Civil War and 1950, many people left the southern states and relocated to the industrial centers in the northeast and north central part of the country. The cities along the Atlantic coast and Great Lakes attracted millions of southern migrants. White and black families moved out of the south (Fairchild & Tucker, 1982). The urban areas were frequently the first place of residence for most immigrants to the United States (Loo & Mar, 1982).

Between 1970 and 1980 the net flow of population to the north completely stopped. People were either remaining in the south or were moving west. Every industrial state in the northeast and north central regions experienced a net migration loss.

All of the Gulf Coast area--from Texas to Florida--had more economic development than the southern and southeastern parts of the country situated away from the coast. This trend, which began in the late 1800s, has continued and since the 1960s has meant extraordinary growth. During the last decade, all parts of the southern United States have gained in population. For instance, the net movement to Florida had, for the first time, exceeded that to California (Bogue, 1985).

Bogue (1985) described two regional migration patterns that occurred in the United States: movement to the west and movement to the south and southwest. The migrants were coming from the northeast and north central areas of the country. This does not mean that there were not families moving to the northern states. In fact, over 2 million people moved to the north and north central regions between 1975 and 1980. These regions gained population from each other and from the southern states, but considerably larger numbers of people moved out.

The migration of black population had a very dramatic turnaround in the 1970's. For the first time the south gained black population through net immigration and the north and north central regions had a net outmigration loss. The flow of black migration to the west also lessened substantially (Bogue, 1985).

From the years 1900 to 1920, the central cities experienced extensive growth. After that time, the suburban areas grew fastest. The migration pattern was from rural to central city to suburbs to exurbs (U.S. Bureau of the Census, 1980).

The tendency for a family to move out of the central city as the family members improve in economic standing was described by Kopf (1977) in Chelsea, Massachusetts, in the early 1900's. This practice continues today for Chinese immigrants, according to Loo and Mar (1982) and for blacks (Bogue, 1985).

Blackwood and Carpenter (1978) characterized a general attitude of anti-urbanism which may contribute to the urban to rural migration pattern. They argued that this feeling may be changing the image of rural America. However, the out-migration rate is slowing and the cities are currently going through revitalization and redevelopment, or "gentrification" (Newman & Owen, 1982).

Also, the stated preferences for rural residency may not always actually become reality. DeJong (1977) interviewed members of 944 families in Pennsylvania. He pointed out that although 76% of his sample voiced a desire to live in a rural setting, only 42% actually made that move.

In the five-year intervals of 1970-1975 and 1975-1980, the central cities in the United States had a net loss of population and the suburban rings gained. This pattern seemed to be slackening somewhat during the last half of the last decade. The cause was not a slowing of the stream of people moving out, but an increase in people moving in, particularly people of Spanish origin (Bogue, 1985).

There is now no single migratory trend in the United States, and the factors leading to long or short distance moves are not as simple as the previous westward expansion or farm to city changes. The movement in the 1980's to the south and west appears less strong and more selective. The net loss of the northeast seems to be less severe. Nonmetropolitanization appears to be slowing and suburbanization is continuing, but not accelerating (Shumaker & Stokols, 1982).

Demographic Factors

Who are the people who are moving in the United States? There are some descriptors which provide information about the mobile American. Following are some personal factors descriptive of mobile people.

Age. Age is the best predictor of mobility--both for the long-distance and the more numerous short-distance moves. The late teens, twenties, and early thirties are the most common years in which to change residences. For example, between 1975 and 1979, 72% of the persons aged 25 to 29 and 63% of the persons between the ages of 20 to 24, changed residences. The overall mobility rate for the same time period was about 40% (U.S. Bureau of the Census, 1980).

Teenagers who are 14 to 17 years old and persons aged 35 and over tend to be less mobile than the average person, and the elderly are approximately one-half as mobile as the average person. The higher than average mobility rate of children under 10 years old is due to the relocation, both local and migratory, of their parents (Bogue, 1985).

Goebel (1982) questioned 586 students attending high schools in the midwest and found that mobility rates were lower at adolescence than during pre- or elementary school. She discovered that inter-community or migratory rates were less frequent at adolescence than during other periods, but that intra-community or local mobility rates were less frequent at adolescence than during earlier periods and also lower at elementary than during preschool.

Females and males. Females tend to become more mobile at a younger age than males. At ages 12 through 24, women are generally more locally mobile and more migratory than males. Then, from ages 25 to 44, males have higher mobility rates. From 45 years to 73 years the rates are equal for men and women. After that time, females are somewhat more mobile (U.S. Bureau of the Census, 1984).

Socioeconomic status. Migration also varies with certain social and economic characteristics. Specifically, mobility differences are associated with household and family relationships, educational background, employment status, occupation, and income level. For example, Miller (1977) distinguished between the long-distance mover and the local mover or the traditional farm to city traveler. Interstate relocators are the more economically advantaged segment of the population. They are well educated, young, in high status jobs, and able to transfer themselves and their families over long distances. They are more likely to work for large companies. Lacey and Blane (1979) wrote that it was the families with parents in professional and managerial occupations who had the highest mobility rates of any two-parent families.

Goebel's (1981) study of high school students found a statistically significant ($F = 3.73$, $p < .01$) three-way interaction between age, socioeconomic status, and type of move. Higher socioeconomic status students seemed to move within their communities more during the preschool period and less during adolescence. In a two-way interaction between age and intelligence, a statistically significant ($F = 2.91$, $p < .05$) interaction showed that for groups of both high and medium intelligence, mobility rates for both inter- and intra-community were greater during preschool than during the elementary or adolescent periods and were greater during the elementary than the adolescent period.

Additionally, the subjects measured as having high intelligence had higher mobility rates during the preschool periods than did subjects of low intelligence. For those students with measured low intelligence, there were no differences in mobility rates relating to age.

Moving for some families is involuntary. Those are the displaced, the families who are forced to move. Newman and Owen (1982) estimated that the annual rate of displacement moves out of the urban regions during the 1970s was 1%. About 5% of families living in urban areas moved at least once in the 1970-1977 time period due to displacement. A majority of the residential displacements were caused when the landlord sold or reoccupied the residence. Newman and Owen (1982) described the families who are most likely to be displaced as those with high housing cost burdens, short periods of occupancy, living in or close to a central city, receiving welfare assistance, and headed by young and poorly educated persons.

Education. The higher the educational attainment, the higher the chances that a person will relocate. Between

1975 and 1979, 26% of the population with eight years of education or less relocated, whereas 48% of those with some college education relocated (Shumaker & Stokols, 1982). This suggests that the children who change schools often may come from homes where education is valued and encouraged.

Race. During the 1970s, the mobility rates for blacks and whites in the United States were equal. The patterns of mobility were different, however. Black families made more local moves. White families made more long-distance moves. Blacks and whites were moving from the central cities to the suburbs at about the same rate (U.S. Bureau of the Census, 1980).

Family structure. Speare, Goldstein, and Frey (1975) wrote that the first year of marriage is almost always linked to residential change. In analyzing data from the National Child Development Study, Lacey and Blane (1979) concluded that all categories of single-parent families moved more frequently than two-parent families. They also wrote that family dissolution due to divorce is associated with higher rates of mobility than dissolution due to the death of either parent.

Area. When place of residence was considered as a mobility variable there were definite differences. The rural farm families had the lowest migration and mobility rates by far. These people were 77% nonmobile. Local mobility rates are highest in the central cities. The suburban areas and small towns of 2,500 to 9,999 residents have low local mobility but a tendency to have above average migration rates (Bogue, 1985).

Home ownership. People who own their own homes are less likely to move than renters. Home ownership provides social and psychological security and increases bonding to a residential community (Speare et al., 1975). Families who have lived in an area for a long time have these same attachments and also move less than the average American family (Stokols & Shumaker, 1982). These families might support the local schools more energetically and be more involved than the mobile families.

Theories of Mobility

Why do people move? The decision-making process for an individual family unit's change of residence is very complex. The stimuli for mobility may range from leaving home to attend college, employment in a full-time capacity, and finally movement to a retirement community or nursing home. Occurring in between those life events may be relocating because of marriage, career promotion or termination, increase in family size, military service, or dislike for the climate or other regional characteristics. Further reasons may include the necessity for special health facilities or technical services, widowhood, divorce, remarriage, employment or change of employment of spouse, cost or inconvenience of commuting, health or handicapping conditions, imprisonment, and forced displacement. This section contains further explorations of these motivators and how they are considered when decisions about moving are made.

There have been numerous attempts at devising a satisfactory theory of migration. These theories have attempted to answer both the questions of why people move and how related variables interacted.

Lee (1966) categorized the factors critical to the mobility decision as those associated with the area of origin, destination, obstacles which intervene, and personal factors. The decision was seen as a weighing of positive and negative factors at the origin versus those at the destination with some modification for individual differences in the effects of these factors. If the perceived benefits favoring mobility are enough to offset the intervening obstacles, the person will move. For example, though a family may have many ties to the residence of origin, it will move if the economic benefits of moving are great. In addition, these benefits must be more valued by the family than the negative factors involved with moving.

A similar model was proposed by Sjaastad (1962). He theorized that a person would move if there were economic benefits anticipated as a result of that move. In order to accept this model, it is necessary to assume that migrants are motivated by rational monetary considerations, that they know about opportunities in other locations and the costs of moving, and that they carefully consider the option of relocating. Speare (1974) criticized this formulation, asserting that a large proportion of nonmigrants never contemplate moving. He favored extending this cost-benefit model to include noneconomic factors and limiting the application to only a segment of the population.

In formulating a mover-stayer model, Goldstein (1964) took into consideration the fact that only 18% of those who had not moved in the preceding five years had given any serious thought to leaving present residences. Goldstein assumed that some people can be classified as movers and some as stayers. He supported this with the observation that high mobility rates were in large part due to a small part of the population who make repeated moves.

McGinnis (1968) refined these ideas by conceiving of a mover-stayer continuum in which the tendency toward relocating depended on the duration of residence. He found that the longer a family remained in a single residence, the less likely it was to relocate.

A more comprehensive approach to a theory of mobility is based on the idea that moving is a response to stress. This view is largely built on the work of Simon (1957) who believed the individual making decisions was somewhat limited in the ability to solve problems and to gather and retain information. To overcome these liabilities, a simplified model of the situation was built and the individual acted rationally with respect to that model.

Simon thought that once satisfactory outcomes were discovered, the search for answers ended.

Rossi (1955) and Wolpert (1966) similarly saw migration as a response to stress between the collective needs of the family and the characteristics of its environment. Sabagh, Van Arsdol, and Butler (1966) emphasized the impact of residential needs based on life-cycle changes, social mobility desires, and changes in the residential surroundings on initiating moving.

Speare (1974) drew on some of the writings mentioned above in order to build his residential satisfaction model. He postulated that family members could be seen as bound to a certain location by ties to other people, feelings of attachment to the place of residence, attachment to a job, organization in the neighborhood, or other local bonds. The strength of these bonds combined to form a general level of satisfaction. The greater the level of satisfaction, the less likely the individual was to think about moving.

Speare surmised that there was a threshold of dissatisfaction at which point considerations of relocating began. Once this threshold was reached, the search for, and evaluation of, alternatives took place. If acceptable alternatives were found, movement occurred. If not, the decision was made to remain. In the case of forced movement through eviction, job transfers, family dissolutions, etc., the second step of the process continued until a choice was made from available alternatives.

In a study which took place in a single labor-market area, Speare's (1974) idea of a threshold of satisfaction was supported. The most important criterion in residential satisfaction was the size of the house. Two other factors, distance from schools and distance from shopping, were moderately important to those questioned. Home ownership also had a significant effect on the mobility variables.

Several weaknesses in these theories of mobility were pointed out by Shumaker and Stokols (1982). They all are based on the assumption that mobility is a viable alternative for all Americans. However, Fairchild and Tucker (1982) and Loo and Mar (1982) refute this idea in their research on black and Chinese mobility, respectively. They wrote of the restrictions imposed on members of minority groups relating to choice of neighborhoods and types of housing. The second flaw is that forced relocations are not accounted for. The choice of whether or not to move is replaced with the search for available and appropriate shelter. Another problem is that these models look only at individual cases and do not take into account the larger social context of the decisions, such as governmental policies. Lastly, these theories omit consideration of the consequences of residential mobility. When families move out of one area and into another, three entities are affected: the family, the sending community, and the receiving community.

External Influences on Mobility

External influences do play a part in mobility outcomes. Clark and Moore (1982) examined the effects of public programs on mobility and the kinds of effects mobility had on public programs. They pointed out that mobility and public programs are related in three major ways: (a) some programs depend on mobility for producing desired effects, such as tax incentives and subsidy programs to stimulate housing improvements; (b) many programs induce new patterns of mobility, such as rent control and school desegregation; and (c) many programs depend on forecasting future population trends, such as school planning and services for the elderly.

Specifically, Clark and Moore (1982) explored the effects of rent control and school desegregation. In the city of Los Angeles, California, rent increases for those who remain in their residence may not exceed 7% per year. However, for dwellings that are voluntarily vacated, owners can raise the rent to any amount they wish. As expected, mobility rates have decreased.

On the other hand, the effects of school desegregation through busing seemed to have different results. Although Clark and Moore (1982) emphasized that there was a complex set of forces present, busing to achieve racial integration very likely exacerbated the existing trends of mobility in the central cities. At the very least, the busing of students created the situation in which large numbers of students were entering schools new to them and to their families.

Panagos, Holmes, Thurman, Yard, and Spaner (1981) also described the white flight as having a strong socioeconomic bias in addition to racial issues. Those leaving the central cities, both white and black, were seeking to live where community standards were at a level they felt better matched their own.

Involuntary movement through displacement is another type of mobility. Three main causes of displacement have been cited (Newman & Owen, 1982). Reinvestment in declining neighborhoods may force residents out who cannot pay the higher rents. When housing is remodeled or converted into higher priced, owner-occupied property, the residents with the lowest incomes must leave to find cheaper accommodations. Disinvestment may mean serious deterioration in the housing, causing condemnation and vacating by residents. Urban renewal or capital improvements often forces current inhabitants to relocate. The local and state governments are acquiring property in order to revitalize urban areas and to expand governmental office space.

Natural and manmade disasters may cause local residents to leave an area. Floods, fires, tornadoes, hurricanes, mud slides, and earthquakes may change the physical environment in such a manner so as to make it uninhabitable. This does not always hold true, however. Shumaker and Stokols (1982) revealed that there are case studies of people who chose to stay in an area after losing their home to a natural disaster and had strengthened ties to the region. Goldhaber, Houts, and DiSabella (1983) scrutinized the effect of the 1979 nuclear accident at Three Mile Island on residential mobility and population makeup. Approximately 15% of those who moved from the area within the year after the incident gave the crisis as the reason for leaving. However, the rate of those moving from the area remained constant. Those moving because of the disaster had characteristics highly associated with mobility. When those characteristics were controlled in an analysis of data, attitudes about the area were virtually the same among movers and stayers. Demographic traits of incoming residents were similar to those of the movers. Yet, attitudes about Three Mile Island were significantly more positive among the new group.

Similarly, Kiecott and Nige (1982) surveyed 1,450 persons living in an earthquake-endangered area. Their results showed that there was no relationship between living in the hazardous environment and a stated desire to move.

Relocation

Approximately 300,000 employees and their families move each year due to the job relocation or job transfer of one of the parents (Gottsman, 1984). From 1982 to 1984, the number of employees transferred by companies increased by 6%

(Moore, 1984). Miller (1977) wrote that over a one-year period, 62% of professional males and 53% of male sales workers had a job waiting for them at their destination before they moved.

There is some evidence that employees' attitudes toward transferring are changing. Magnus and Dodd (1981) reported that in 1980, for the fourth consecutive year, there was a decrease in the number of workers who had once transferred and would be willing to do so again. The percentage in 1980 who would be amenable to move again was 76.3%, a decline from 78.8% in 1979.

The most common reason attributed to this hesitancy has been the financial burden. Additionally, ranked on a scale from most important to the least important factors considered in relocation decisions, family attitudes and concerns about the new job ranked one and two, respectively. The next three most important factors were the cost of housing and living in the new area, purchasing a home, and selling the previous home. These patterns of transfer resistance also parallel recent trends in society, such as the increasing preference for lifestyle over career advancement and an increase in the number of dual-career couples (Magnus & Dodd, 1981).

To corporations, however, relocation is often cost effective. It is beneficial to have employees with the needed skills and experience in the geographic areas where they are needed. Relocation is one way of managing the company's human resources. As reported by Magnus and Dodd (1981), two out of three Fortune 1000 executives expressed the belief that varied kinds of experiences in different geographic areas were significant in grooming senior management personnel. Relocation, through recruitment in other areas, was also seen as a method of bringing new talent into an organization.

Plant shutdowns and relocations have an effect on the residential mobility of workers. For example, from the years 1958 to 1976, the number of rubber workers making tires in the city of Akron, Ohio, decreased by 18,000. Many rubber companies left Ohio for Tennessee and Oklahoma, taking some employees along but leaving the majority behind. Many of these remaining employees had to either move to less expensive housing locally or leave the Akron area looking for other kinds of work (Felsten, 1981).

Some families relocate via information and migration mechanisms operated by the extended family. Through kin-based recruitment strategies, workers learn of employment opportunities in other areas. The family becomes an agency of migration by notifying members of job openings before they are generally publicized. The spearhead, or original employees, pass on knowledge or skills before the job interviews, thus presenting the company with an already trained recruit (Grieco, 1982).

Impact of Mobility

The general impact of mobility research will be presented in this section as it pertains to mobility and community, government, business, employees, adults, parents, families, schools, and children. The movement of people from place to place influences all of these segments of society.

North America has always been populated by people on the move. Anthropologists believe the first groups of humans entered the continent over a land bridge to Alaska and continued traveling throughout the vast area. European explorers and colonizers arrived on the coasts and pushed inward. Exploring and settling uninhabited and sometimes uninviting areas have been linked with such American traits as rugged individualism, attachment to guns, upward mobility, feminism, inventiveness, and the desire for space exploration. The importance of physical movement was observed by historian Alexis de Tocqueville in 1830, as quoted earlier (Long & Boertlein, 1976). Frederick Jackson Turner characterized the westward movement as the "overriding influence of national life." He wrote that the freedom of Americans to migrate westward "did indeed furnish a new field of opportunity, a gate of escape from the bondage of the past" (cited in Kopf, 1977, p. 206).

When it became clear that mobility did not cease when the western areas were populated, a more unfavorable view of mobility grew. Long and Boertlein (1976) reviewed early twentieth century writings and determined that the earlier ambivalent feelings about mobility changed to mostly negative ones. Relocation was seen as an unpleasant trait in the national character. Americans were perceived as having an inability to make lasting commitments to a community, to establish ties.

In 1963, Handlin wrote that, "Americans in the 1950's remained confused and uncertain because they remained unsettled. Constant mobility had left a mark that could not readily be cast off. . . . Will it or not, they all remained to some degree strangers" (p. 222).

In his book, Future Shock, Alvin Toffler (1970) argued that

> never have man's relationships with place been more numerous, fragile and temporary. . . . We are witnessing a historic decline in the significance of place to human life. We are building a new race of nomads, and few suspect quite how massive, widespread, and significant their migrations are. (p. 75)

These ideas were also discussed by Vance Packard (1972) in A Nation of Strangers. He suggested that mobility was a symbol for the breakdown of social ties.

Other sociologists of the 1970's and 1980's have taken more favorable views. They concluded that moving, per se, is not necessarily negative. Rather, it is a natural outcome of changing family needs (Rossi & Shlay, 1982; Stokols & Shumaker, 1982). For example, Shumaker and Stokols (1982) reviewed mobility studies and surmised that "community viability, local sentiment, and attachment to local environments remain strong in America, although the character of this attachment may be changing" (p. 4).

Impact on Communities

Changes due to movement of people affect small communities and large regions of the United States. The long-distance mover has been profiled as the advantaged, young, and well educated. More affluent Americans often relocate to take advantage of improved lifestyles. This shift in the kinds of people moving, combined with the mobility patterns, may continue to cause problems in some areas of the country. In the north and north central states a decrease in revenue, larger proportion of older citizens, and a disproportionate number of unskilled or semi-skilled laborers in a society based on technology are growing factors which are related to migration. As a tax base decreases, revenue for education is also affected adversely.

In the west, southwest, and southern states, rapid population growth has meant a drain on resources such as land, housing, water and waste treatment, and utility production. The concomitant cost of living increase has created problems for the less advantaged living in these areas of growth (Browne, 1984; Shumaker & Stokols, 1982).

Clark and Moore (1982) told of the effects migration had on central cities. As people who could leave did so, crime increased, buildings decayed and some were demolished, and schools and businesses closed down. Shumaker and Stokols (1982) cautioned that it was inappropriate to link these transiency-related problems to the national mobility rate. They proposed that these transient communities result from local planning decisions, policies concerning land use, and housing discrimination. These factors combined to contribute to physical disintegration and the limiting of abilities or willingness to improve the neighborhood. Then, those who can leave go and those moving in do so because they have nowhere else to go (Loo & Mar, 1982; Speare et al., 1975). Those who reside in these areas will be those who are forced to due to economic circumstances. Community bonding will be inhibited, which may produce destructive or reactive behaviors against the environment.

Communities are also affected when corporations transfer a group of employees from one location to another. Those areas in which the groups formally resided may experience some of the negative economic outcomes outlined above. Kanner (1984) held that the property values in the sending and receiving areas may become skewed. The region to which the families are relocating may incur expenses to accommodate the growth. This has occurred in situations such as the one in which the General Motors Company announced the location of a plant in Spring Hill, Tennessee ("GM Picks a Winner," 1985).

Impact on the Individual

Residential change has been conceived of as a stressful life event (Brammer & Abrego, 1981; Wofsey, Rierdon, & Wapner, 1979). Demick and Wapner (1980) compared measurements dealing with the person-environment system of members of a psychiatric therapeutic community at four different times before and after relocation. They found significant disturbances in the ways the patients viewed self, environment, and self-environment relations.

Three groups of elderly people living in nursing homes were studied by Bourestom and Tars (1974). One group was involuntarily moved to a new, larger home in a nearby community. There they encountered a new staff, new program, new physical environment, and a new group of patients. The second was also relocated to a new building. However, the home was only several hundred yards away and the staff, patients, and program remained the same. The third group underwent no environmental change.

Bourestom and Tars (1974) showed that the mortality rates for the relocated groups were much higher than for those who had not moved. This effect was significantly greater for the group who made radical changes than for the moderate-change group. The patient's anticipation of the relocation had effects which were nearly as lethal as the move itself for the radical-change group. The moderate-change group experienced a peak in death rates during the seven- to nine-months period after moving, much later than the radical-change group. Other measures such as self-perceived changes in health, relationships with others, activity patterns, and levels of behavioral complexity followed the pattern described above. That is, the radical-change group showed the most negative effects in all areas. The investigators suggested that the degree of environmental change was an important source of variance in relocation effects.

Magnus and Dodd (1981) saw relocation as a time of stress which may be equated to the death of a family member or a divorce. Bourestom and Tars (1974) also observed grieving behavior in relocated persons. Levin, Groves, and Lurie (1980) identified sadness and grief as predominant feelings of mobile women. Grieving was experienced not only for important people, but for places and activities as well. Children, too, might experience this sense of loss as they leave the school community.

Rosalind Forbes, a stress consultant quoted by Magnus and Dodd (1981), has characterized response to stress as either fight or flight. A worker may put in an inordinate amount of time and energy, then become frustrated, argumentative, and hostile. Those employing the flight mechanism withdraw from the problems of adjustment. Children also have been observed acting in such diverse ways.

These techniques to handle relocation stress are somewhat similar to those described by Brett and Werbel

(1980). According to the researchers, active coping and passive coping help people handle stress. Active coping is exemplified by exerting more effort to deal with an unfamiliar situation. Passive coping involves increased smoking, drinking, irregular eating, and seeking social and emotional support from others. No doubt, children must learn to cope with a family relocation.

When families are transferred by the employer it is usually the husband whose job is involved. Brett (1982) found that the wives did not oppose the transfer, but did express dissatisfaction at the necessity of continually establishing new connections within the community. Brett (1982) theorized that the woman's depression concerning relocation stemmed from a learned helplessness.

Seidenberg (1973) reached dire conclusions in his study of job transfer and women. He listed such characteristics as defeated, casualties of their husband's success, chronically depressed, lacking in hope or drive, and frequently addicted to alcohol, tranquilizers, and barbiturates.

Duncan and Perucci (1976) conducted research dealing with the relocated wife and her career. They found that moves seemed to hinder advancement. After relocating, the woman would usually be required to enter the work force at a lower rung on the ladder.

Snow (1984) cautioned corporations to transfer only those employees whose spouses are in favor of the move.

Support for his ideas came from a 1983 study by Equitable Relocation Management. After questioning 395 relocated employees, it was found that when the spouse was supportive of the move, the new home was seen as more desirable, a swift and easy adjustment to the new environment was made, and the move was seen as economically beneficial. These employees were also willing to transfer again if they needed to. When the spouse was less enthusiastic, difficulties in selling the old homes were reported. The workers believed their total economic status declined and they did not believe the transfer helped their careers. They also reported that they would not want to move again.

There have been different kinds of strategies proposed to mitigate some of the negative impacts of mobility. Fink (1984) reported that the average cost of a move was $31,690 in 1983. Corporations generally pay these charges and make additional kinds of reimbursement to transferred employees. Gault (1984) reviewed corporate services offered to transferees. Assistance is given in selling the former house. Trips to find a new residence are provided. Household goods are shipped to the destination. The family is transported and given temporary living expenses. Closing costs, utility hookup fees, and tax assistance are covered. Magnus and Dodd (1981) explained other help, such as mortgage interest differential allowances, cost of living allowances, and short-term loans.

Levin, Groves, and Lurie (1980) told of another kind of help--support groups for relocated women. Magnus and Dodd (1981) suggested preventive counseling before, during, and after moving. Some companies provide the spouse with counseling and assistance for personal and professional growth. Hunsicker (1981) supported the finding of a community mentor in the new area to help ease adjustment. He found this to be particularly effective when employees are transferred to a small town. Perhaps children would benefit from this type of peer assistance to make the transfer less stressful and the settling in easier.

Some positive factors associated with moving have been reported. In her study of 350 families who had transferred, Brett (1982) found that the moves were usually made to take advantage of opportunities for career advancement. She found very few differences between these mobile families and nonmobile families who took part in the 1977 Quality of Employment Survey, the 1978 Quality of American Life Survey, and the 1976 Mental Health Survey. Mobile employees were significantly more involved with their jobs ($r = 13$; $p < .05$). Mobile working women were more satisfied with chances for promotion, had more discretion in making decisions, and more authority.

Brett (1982) also indicated that mobile men and women were more satisfied with their marriages. Family life was also reported to be more satisfactory to the mobile parents.

Mobile men disclosed a higher satisfaction with their housing than their nonmobile counterparts.

Kalin and Berry (1980) sampled 1,277 persons in Canada and found that geographic mobility was consistently related to ethnic tolerance. This held true for all ethnic and socioeconomic differences. They submitted that a general experience of diversity, for whatever reason, appeared to be a consistent predictor of an acceptance of diversity.

Jones (1973) surveyed 256 women about their experiences related to a recent move with their families. This group was made up of families of higher than average socioeconomic status. Approximately 70% of the husbands were classified as managerial or professional. The wives saw themselves as the central figure in the moving process. They reported generally positive effects of moving and these were greater as a function of their involvement in the planning stages of the move. Most of the women indicated that they had grown in interpersonal skills and that they continued to maintain close relationships with relatives. They did report stress two weeks prior to moving and during the first two weeks in the new community. These feelings returned to the levels typically found in the former place of residence and the women reported that they had grown in their ability to cope with stress. They believed themselves to be more flexible and adaptable, have broader ranges of interest, and more understanding and accepting of different people, cultures, and customs. However, since the majority of those who had ever been employed worked in clerical positions and only 19% were employed at the time of the survey, many of the concerns about career expressed in other studies would not apply.

Impact on Children

Mediating factors

Parent to child. Children are affected directly and indirectly by moving. Morris, Pestaner, and Nelson (1967) asserted that children may experience emotional disturbance related to mobility due to a deterioration of parenting. This deterioration occurs as the parents attempt to become adjusted to new surroundings and devote more time and attention to their jobs. The adults' feelings of alienation and insecurity, combined with the normal challenges of child rearing, bring increased stress which is ultimately communicated to the child.

Pederson and Sullivan (1964) compared 27 children classified as emotionally disturbed at a child guidance clinic with 30 carefully matched normal children. The fathers of all the children were in the military. They found no significant difference when considering geographic mobility. However, the parents' attitudes towards relocating did differentiate the groups. The mothers of the normal children were significantly more accepting of moving. Both parents of the normal children revealed a stronger identification with the military than did the parents of the emotionally disturbed boys. Pederson and Sullivan (1964) postulated that the attitudes of the normal children's parents served to mediate the stress encountered during moves.

McKain 91973) found similar results in another study of military families. He discovered that there were some families in which the parents, especially the wife, felt alienated from the army community, and were never able to integrate into the social life. For these people, moving was experienced as causing negative consequences for the parents, their marriages, and their children.

A comparative study was undertaken to evaluate families of child abuse and accident victims (Daniel, Hampton, & Newberger, 1983). Each child was matched with a control according to race, socioeconomic status, and age. The families in which abuse had occurred differed from their controls in that they were more socially isolated, had a maternal history of corporal punishment, and had a generally more stressful living situation. The abusing families were also more mobile.

The families in which a child had been a victim of an accident were highly mobile, but had greater access to shopping and to recreation than the comparison group. Fewer factors differentiated the families where the accident happened from their controls than did the families of abuse. The authors acknowledged that the degree of social isolation and maternal depression were greater for mothers of abuse victims. These factors were associated with geographical mobility.

Whalen and Fried (1973) suggested that parental attitudes concerning moving have a direct effect on their children's school achievement. They recommended further research in this area. Likewise, Levine (1966) wondered whether parents' disapproval of differences in school curriculum and methodologies from one district or school to the next might have an affect on the attitudes and feelings of the children.

In outlining results from her survey of mobile families, Brett (1982) characterized the depression sometimes felt by the wife as coming from a sense of helplessness. She found that, in cases of an unwanted transfer, the woman believed there was nothing she could do to stop it, and if she did nothing it would happen anyway. This is one of the several ways in which the position of the child is similar to that of the mother in relation to relocating.

Levine (1966) recorded his impression that children were often given little or no explanation for moving, even including any reason for the departure of the father, in the case of dissolution. Beem and Prah (1984) pointed out that from the child's point of view, the decision to move is an arbitrary one. Parents may discuss plans for relocating with each other, but the child must accept the conclusions.

At this point, the child's sense of control may be threatened and the child feels helpless.

Socioeconomic status. An important variable which seems to mediate the impact of mobility is socioeconomic status. This factor is highly correlated with other factors such as the distance moved and the reasons for leaving one place for another. The long-distance mover has been described as the advantaged, educated, young person who is advancing up the career ladder. This family of greater than average socioeconomic status generally relocates to benefit from a promotion and higher income (Bogue, 1985; Shumaker & Stokols, 1982). A family with greater resources can usually mitigate some of the liabilities involved with moving by maintaining contact with family and friends by telephone and by visiting the former community. Membership in national organizations can also be maintained. Children can continue to participate in scouts, church groups, Little League, and dance lessons.

Families of lower socioeconomic status are more often than not the ones affected by displacement and must make involuntary moves (Newman & Owen, 1982). Fewer choices are also available for minority families (Fairchild & Tucker, 1982; Loo & Mar, 1982).

Levine, Wesolowski, and Corbett (1966) found that in the lower socioeconomic status families, residential changes were made because of some family distress. The families were seeking cheaper dwellings because of separation or divorce, or were being evicted, or were experiencing a "restless moving from one inner city neighborhood to another for no obvious reason" (p. 157).

Morris et al. (1967) anticipated that mobility would affect the reading achievement of lower socioeconomic status children more because the broken schooling would create longer periods of time for them when they would not be exposed to books and other educational materials. However, the children of wealthier families would continue to see books, newspapers, magazines, etc. This latter group would probably also be exposed to the cultural and educational offerings of the new community.

Mann (1972) described the character traits necessary for integration into an unfamiliar atmosphere as coming more from a middle-class orientation. Some of these were the ability to initiate conversations with strangers, openness to a wide range of behaviors in others, and independence from parents as a source of support.

Benson, Haycraft, Steyaert, and Weigel (1979) found that socioeconomic status was negatively correlated to mobility and positively related to adjustment. Goebel (1981) reported that students of different socioeconomic status moved at different times and to different locations. Her investigation pointed out that compared with higher socioeconomic students, lower socioeconomic students seemed to move within their communities less frequently during the preschool period and more frequently during adolescence.

Because of these kinds of findings, there has been criticism of mobility research which does not control for the interrelated variables of reasons for moving, distance of moves, racial and ethnic identity, and socioeconomic status. Even though studies by Greene and Daughtry (1961) and Cramer and Dorsey (1970) found no significant relationship between distance of mobility, achievement, and adjustment, the general belief is that these are important moderator variables (Felner, Primavera, & Cauce, 1981; Goebel, 1981; Lacey & Blane, 1979; Morris et al., 1967).

Number of schools. The evidence concerning the effects of different numbers of schools attended is seemingly more contradictory. Lacey and Blane (1979) indicated that in a national sample of British families the number of schools attended had the least effect of the nine variables studied.

Schaller (1976), in a study of 895 Swedish high school students, found that one move during the elementary school years had no effect on academic performance. However, two or more moves did relate negatively to academic work. Morris et al. (1967) found an interaction between socioeconomic status, number of moves, and school achievement. He argued that for lower socioeconomic students, the first move is the most damaging one. Felner et al. (1981) evaluated data that "multiple experiences of school transfers appear to act cumulatively to produce significant decreases" in grades earned (p. 455).

Perrodin and Snipes (1966) reached other conclusions concerning the effect of the number of moves made by students. When they measured arithmetic skills, they found that pupils moving more than five times did significantly better than those students who had experienced fewer moves. Similarly, Greene and Daughtry (1961) found that pupils who had made a greater number of moves from school to school scored higher than the average student on the California Arithmetic Achievement Test, were older than the average, and had fewer than the average number of school absences in the eleventh grade. Clearly, there are other facets concerning the number of incidences of mobility which require investigation.

Age. Less data are available concerning the relationship between children's age and mobility. The subjects in Goebel's (1981) study were 586 students attending two midwestern high schools. She indicated that there was a statistically significant ($F = 3.73$, $p < .01$) three-way interaction between age, socioeconomic status, and the distance moved. Higher socioeconomic status students moved more frequently within their community as preschoolers. Goebel (1981) also presented findings from a two-way interaction between age and intelligence which indicated that for both groups of high and middle intelligence, mobility rates for long and short-distance moves are greatest during the preschool period. Mobility rates for these groups were greater in elementary school than during middle or high school. Mobility rates for the students with lower measured intelligence did not differ by age.

When age alone was considered, general mobility rates were lower at adolescence than for the pre- or elementary school periods. Goebel (1981) surmised that the more financially able families moved about during the children's early years, improving their living conditions. Once their children were teenagers the family was well established. The families with lower incomes, on the other hand, possibly continued the upgrading process over a longer time period or moved involuntarily because of financial difficulties.

Tooley (1970) contended that the most stressful ages for relocating are five and six years. He held that since these students were emotionally involved with the home to school move, changing place of residence would be difficult for them. However, Smardo (1981) wrote of evidence that suggested that elementary school aged children would have more problems transferring because of ongoing language development and interpersonal skills acquired at that time.

Brett (1982) inventoried mobile families and submitted that the degree of mobility was related to the quality of friendships for elementary school students but not for middle and high school students. However, missing former friends was of more concern to teenagers than to the younger children. Making new friends was harder for teenagers, as well. Bayer and Cornille (1984) also reported the teen years as more problematic in this area.

Female and male. Bogue (1985) reported that there were sex differences in age patterns of mobility. Beginning with age 12 and continuing through the age of 24, females tend to make more short- and long-distance moves.

Perrodin and Snipes (1966) conducted a study to investigate the relationship of mobility to school achievement for sixth-grade students. They said that the boys and girls in their study had the same patterns of numbers of moves, recency of moves, and distance of moves. Thus they found no relationship between mobility and sex.

A relationship between the number of moves made and low grades was observed by Levine et al. (1966). This held true especially for girls in fifth and sixth grades. Lower citizenship ratings were also given to the mobile girls. This was reported as one of the few instances when girls did not fare as well as boys in academic performance.

Contrary results were reported by Goebel (1981). She found that mobility was significantly related to lower achievement for males and not for females. Feldbaum, Christenson, and O'Neal (1980) observed different rates of integration of boys and girls in a preschool. Although they acted similarly at the beginning, the males were a part of the routine activity by the fourth week. Feldbaum et al.

(1980) described the females as requiring two to three more weeks to become fully involved in the interactions.

Mann (1972) found a positive relationship between mobility and intellectual orientation, autonomy and independence, and adaptive behaviors in college males. These characteristics were not observed in the college females in the sample.

Recency. The last moderator variable to be considered is the recency of the move. McKain (1973) found a relationship between mobility and alienation in military families. The correlations he found did not change as a result of recency of relocating. Greene and Daughtry (1961), in a study of 434 high school juniors in Savannah, Georgia, proposed that students who had recently moved there had fewer school tardinesses during the eleventh grade and had comparatively favorable home adjustment scores on the Bell Adjustment Inventory.

There are anecdotal reports which describe a newcomer to a school situation. Feldbaum et al. (1980) stated that new preschool students isolated themselves spatially, engaged in off-task behaviors, and did not play or communicate with other children. Bayer and Cornille (1984) described the recently entered child as often bewildered and frightened. Crabbs and Crabbs (1980) tell of new students being anxious and fearful, withdrawing, and dependent. These researchers observed that for many of the new students, these disturbed behaviors were temporary. The recency of the move was an important factor in the lack of integration for the children.

Mobility and school achievement

The greatest amount of research dealing with mobility and children pertains to the relationship between mobility and school achievement. The following studies explored this relationship using various measurements of achievement. The investigations were carried out in locations across the country and in two other countries. The subjects involved were from all kinds of backgrounds and experiences.

In an examination of data gathered from 438 sixth-grade pupils who attended six elementary schools in central Georgia, Perrodin and Snipes (1966) analyzed student achievement in reading, arithmetic, and language. Other data secured were the number of moves made, the recency of the move, the distance of the moves, students' sex, socioeconomic status, age, whether or not the students had been retained, and a measure of intelligence. The California Short-Form Test of Mental Maturity, Form S, and the California Achievement Tests Complete Battery, Form W, were administered to measure intelligence and achievement, respectively. The students were divided into categories based on mobility, sex, age, socioeconomic status, retention, and IQ. The means for each group in each achievement section were calculated. The mean differences were subjected to the analysis of variance technique. As differences were found, a t-test was used to determine the strength of the relationship.

Perrodin and Snipes (1966) presented results which indicated that the number of moves experienced by pupils did not appear to affect achievement in reading vocabulary, reading comprehension, arithmetic reasoning, mechanics of English, and spelling. The recency of the move seemed to be a related factor to achievement in arithmetic fundamentals and spelling. Higher achievement in these areas was evident among students just entering the present school. The distance moved seemed to relate to achievement in all the academic areas mentioned. Students moving from other states scored higher in achievement than those who had moved within the state or those who had not moved at all ($p \leq .05$). Thus, although this study was conducted in only one school district at one grade level, the results did not support the negative beliefs about the impacts of mobility widely reported in popular literature.

Whalen and Fried (1973) distributed questionnaires to all eleventh-grade students in both high schools in Livermore, California (N = 874). Only 79 of these students had intelligence and achievement tests results available and met the criterion for mobility of having attended schools in four or more different cities. From the students who had always attended school in the present city, a group of 79 was randomly selected. The socioeconomic status of each student was determined through the use of Hollingshead's

Occupational List. Intelligence was measured on the Lorge-Thorndike, Level G, verbal IQ scores. The general vocabulary subtest of the Iowa Tests of Educational Development measured achievement.

No significant differences were found in the achievement scores of mobile and nonmobile pupils. The data generated also indicated that mobile students of high ability had higher achievement scores than nonmobile students of high ability. Mobile students of lower ability obtained lower achievement scores than nonmobile students of lower measured ability. No significant differences were found between high- and low-socioeconomic status students and there was no significant interaction of socioeconomic status with either mobility or intelligence (Whalen & Fried, 1973). However, this study did not take into account intra-city mobility or recency of moves. The subtest chosen to measure achievement may be interrelated with the measure of intelligence used, as both measure verbal skills.

The following three studies also examined the relationship between mobility and achievement. Each sample described was partly composed of children from military families. This may limit the generalizability of these results to other mobile populations.

As Lacey and Blane (1979 noted, the rate of mobility in military families is approximately twice that found in the general population. The decisions regarding transferring are externally controlled and the cost, place of residence, and community integration are cushioned by membership in the armed forces. The socioeconomic status of military families is from a more restricted range than that in the general populace. Lacey and Blane (1979) also pointed out that by the time the children of military families are of school age, those families who were not successful in or adjusted to the military have left. The remaining families usually include two parents. The fathers are experiencing career advancement and satisfaction. It would seem logical that mobility would have different consequences for those children.

Greene and Daughtry (1961) described some characteristics of 434 eleventh-grade students attending a high school in Savannah, Georgia. Although the authors reported that the city of Savannah was populated by a large number of military personnel, no exact figures were given for percentage of military dependents in their sample. The investigators took three measures of mobility: the number of moves from one school to school, the recency of moves, and the distances moved. School records were the source of the additional data. Grades in 20 school subjects, subscores on the California Test of Mental Maturity, and the California Achievement Test were utilized as measures of achievement and intelligence. Other measures were also taken of adjustment, age, absences, and tardinesses.

It was reported that a statistically significant (p = .01) relationship existed between number of moves and achievement. Students who had made a greater number of moves were more likely than the nonmobile student to score higher on the arithmetic subtest of the California Achievement Test. Students who were long-distance movers earned higher grades in biology, Spanish, and music than nonmobile or short-distance movers (Greene & Daughtry, 1961).

In a study of 98 fifth- and sixth-grade students in Indiana, report card grades were also used as a measure of academic achievement (Evans, 1966). The school attended by those pupils was located near Bunker Hill Air Force Base, so it must be presumed that children of military families were heavily represented in the sample. Intelligence test scores were also recorded. Combining data for the fifth- and sixth-grade students, Evans found no difference in the abilities of the mobile and nonmobile group. He wrote that the mobile pupils earned better grades in reading, science, social studies, and arithmetic than the nonmobile pupils. He concluded that mobility was not a handicap to elementary school children (Evans, 1966). Caution must be used, however, in accepting these results fully. Report card grades are a very subjective source of achievement data. Also, the author did not define mobile and nonmobile; nor did he report the level of significance considered.

Cramer and Dorsey (1970) studied the differences in reading achievement between children who had moved from place to place and those who had always lived in the Mad River, Ohio, School District. Many of the mobile students were children of air force personnel stationed at Wright-Patterson Air Force Base. Cramer and Dorsey (1970) obtained data on 366 sixth-grade students attending five elementary schools. Correcting for the effects of age and intelligence, as measured by the Lorge-Thorndike Intelligence Tests, no significant differences were found in the reading achievement of mobile and nonmobile students. Higher scores in vocabulary and comprehension were made by long- and short-distance movers than those made by the nonmobile students, but these differences were not significant. These studies found few problems related to mobility. However, others have raised concerns in connection with moving and school achievement.

Negative effects of mobility on achievement were found by Kealey (1982). In a study involving 1,882 seventh-grade students attending 43 inner-city parochial schools in Manhattan and the Bronx, New York, results were gathered on reading and mathematics achievement. The mobile students, those attending more than one elementary school, were outscored by the nonmobile group by an average of one year and six months in reading. In mathematics, also measured on the Science Research Associates Achievement Test, the nonmobile group averaged scores one year and three months greater than the mobile group (Kealey, 1982). This study did not control for many variables and did not include subjects from a wide background and environment. The achievement data were reported in grade equivalents, which is not generally the most useful form.

Panagos, Holmes, Thurman, Yard, and Spaner (1981) devised an intervention to assist students moving in inner-city schools. They estimated that 70% of these students suffered from academic deficits. Their goal was not to investigate mobility and achievement, but to remediate the skills necessary for academic success.

An inner-city school was also the location of a study by Levine et al. (1966). They compared the student record cards of 574 elementary students in grades one through five. The measure of achievement was taken as the average report card grades for the entire school career. In all grade levels, the mobile students received poorer grades. This relationship was reported strongest at the upper grades. Even though the measurements taken seem much too gross for judging the effects of mobility adequately, a striking fact was included in this report. According to Levine et al. (1966), "no child with an A average has been in more than two previous schools. On the other hand, 38% of the children with D and F averages have been in two or more previous schools" (p. 155).

A sample of 410 students attending fifth grade in Alameda County, California, were described by Morris et al. (1967). These numbers included all the white children at that grade level in the district. Reading and mathematics tests from the California Achievement Test and the

California Test of Mental Maturity were given. The number of schools attended and the fathers' occupations were ascertained from school records. The socioeconomic status of the family was then determined. Taking intelligence, race, and socioeconomic status into account, it was found that mobility had a negative effect on reading, but not on arithmetic (Morris et al., 1967). The authors were very cautious in considering the reading achievement data, however. They calculated that the chances were approximately 2.5:1 that high socioeconomic status students would never score in the bottom third in reading no matter how many school transfers they made.

Benson et al. (1979) collected data on 1,007 sixth-grade students in 17 schools in a county in northern Colorado. The four major variables investigated were socioeconomic status, mobility, achievement, and adjustment. Achievement was operationalized as the percentile rank for the reading subtest of the Stanford Achievement Test.

Using Pearson product moment correlations for mobility, adjustment, and achievement, it was found that mobility was negatively related to achievement ($r = -.16$; $p < .001$; $N = 687$). The authors expressed the belief that inflexible curriculum and inadequate interschool communication may contribute to this result (Benson et al., 1979).

Student records of 250 students who had completed ninth grade in a northeastern city were analyzed by Felner et al. (1981). They described the three schools these pupils attended as serving predominantly non-white, lower-income families. Academic grades in English, mathematics, science, and social studies were converted into a numerical grade point equivalent and yearly grade point averages were calculated.

Pearson r correlations revealed a significant negative relationship between the number of schools attended and grade point averages for both black students ($r = -.163$, $p \leq .02$, $n = 160$) and for Hispanic students ($r = -.541$, $p \leq .005$, $n = 23$). For white students, no significant relationship was found ($r = .098$, $p =$ ns, $n = 54$). The authors later studied the matriculation of students from junior high to high school within the same community. The results were similar. Minority students experienced a reduction in grade point averages while white students did not (Felner et al., 1981).

Schaller (1976) found a negative relationship between mobility only when students moved two or more times. He used the permanent record cards of 895 ninth-grade Swedish students to gather information in order to make conclusions about mobility and students' grades.

Schaller (1976) also made a discovery about the mobile group which suggested that mobility researchers should look carefully at more data. He found that the most mobile group was achieving at a lower level before any school transfer had been made. Since studies on mobility are usually based on ex post facto data, he warned at drawing hasty conclusions (Schaller, 1976).

Auer, Lahr, and Docter (1978) considered the mobility-achievement area in a different way. They collected data on 435 elementary schools in a Southern California city. In attempting to isolate important factors in reading achievement, the authors considered the influences of school characteristics, student characteristics, and neighborhood characteristics. School characteristics were school achievement as represented by the median percentile reading score at grades one, two, three, and six on the Stanford Primary Reading Test; tenure; salary of the staff; and the instructional expenditure per child in average daily attendance. Student characteristics were turnover (ratio of students entering or leaving a school during an academic year to the enrollment of the school at the beginning of the school year) and ethnic identity. Neighborhood characteristics were the median family income and median family education.

Generally stronger associations between neighborhood and student traits and achievement scores were found than between school traits and achievement. Ethnicity, income, and education were all correlated to reading achievement. There was also a definite and independent inverse relationship between the rate of turnover and achievement level. This relationship held for differing socioeconomic and ethnic contexts. Auer et al. (1978) wrote:

> This would seem to suggest that while moving from school to school may have no adverse effect upon the achievement of individual children, the movement of children from school to school has an effect upon achievement and this effect is apparently related to how many or how frequently children move. Thus, the adverse effect of pupil turnover upon achievement may be one which is mediated through the structure of the social unit and/or learning environment in which schooling takes place. Furthermore, it seems that stability of membership of the social unit (the classroom) is one of the necessary conditions of obtaining optimal achievement performance from the unit and perhaps for many members of the unit. (p. 15)

Impact of mobility on the adjustment problems of children

When school-age children move, they must cope with any additional family stress. They are also faced with a new school environment which includes different classmates, a new teacher, new physical surroundings, and new curriculum and instructional systems. In order to determine what changes occur in relocating, social scientists and educators have explored the areas of children's behavior and adjustment.

Thirty years ago, the effects of mobility were reported by the child therapist, Robert Stubblefield (1955). He related four case studies of children who moved. An eight-year-old girl became extremely aggressive towards her brother. A nine-year-old boy became defiant, aggressive, and angry towards his father. An adolescent girl gained excessive weight and became depressed. A teenage boy became aggressive and was expelled from school, then ran away from home. Stubblefield (1955) suggested that through proper preparation, and encouragement to express emotion and explore the positive and negative facets of relocating, parents can help children adjust to moving.

Urie Bronfenbrenner (1974) decried the estrangement between adults and youth in the 1970s. He characterized the isolation families were experiencing as partly due to mobility. He stressed the need for contact with people older and younger in order to grow into productive, adjusted citizens and felt that residential upheaval lessened the chances of this occurring.

Benson et al. (1979) in the study of sixth-grade pupils in Colorado analyzed children's adjustment by using a classroom behavior inventory. This instrument was completed by the school counselors who, sometimes assisted by the classroom teacher, rated the students on peer adjustment and general adjustment, yielding one total adjustment score.

Pearson product moment correlations were used for mobility and adjustment. Mobility was found to be negatively related to adjustment ($r = -.15$; $p \leq .001$; $N = 742$). No reliability figures were given and there was little description of the classroom behavior inventory. It was implied that the scales of peer adjustment and general adjustment were actually composed of one question each with a Likert-type response set of descriptors.

Levine et al. (1966) used a measure for adjustment which would seem equally unreliable. They defined adjustment as the average citizenship mark for the student's school career and surmised that these grades reflected children's work habits and obedience in the classroom. Grouping grades F, D, and C together they found that there tended to be an underrepresentation of A's received by the mobile and nonmobile pupils.

Greene and Daughtry (1961) included a measure of adjustment in their evaluation of high school juniors in Savannah, Georgia. Results from the Bell Adjustment Inventory were reported, but no information concerning the instrument was provided except that there are sub-scores entitled Bell Home Adjustment score and Bell Social Adjustment score. The writers found that students who had recently moved had comparatively favorable home adjustment scores on the Bell Adjustment Inventory. Students who had moved greater distances had comparatively positive social adjustment scores on the Bell Adjustment Inventory.

In a study of military families, McKain (1973) distributed to parents a children's problems checklist derived from the Midtown Manhattan Questionnaire. The subjects were asked to tell whether or not the onset of any problem occurred at the same time as the move. There was found to be a significant correlation between perceived children's problems and the time of move. However, the author stated that the correlation was small compared to the widely discussed traumatic effects of moving on children. It was concluded that children's problems were exacerbated with the increased alienation of the mother (McKain, 1973). However, the data presented pertaining to children's problems were somewhat questionable because the parents were asked to recall situations which had happened months before.

Goldberg and Wilensky (1976) sought to identify the influences which affected aggressive behavior. They studied the clinical records of 85 boys and girls who had been treated at a psychiatric clinic. The writers postulated that frustration variables led to aggressive behavior and that high mobility rates would increase frustration. Minimal relationships between mobility and aggressive behavior were found.

Kroger (1980) explored the relationship between mobility and self-concept in eleventh-grade students. Mobility was defined in terms of the number of moves made, the distance of moves, and the recency of the last move. Self-concept was measured by the Berger Acceptance of Self Scale. Variables which were controlled by Kroger (1980) were socioeconomic status and family cohesion using the Nam-Powers 1970 Occupational Status Score and the Elias Family Opinion Survey, respectively.

No statistically significant correlations between self-concept and number of moves were found. The distance of moves was revealed to have a significant negative correlation ($r = -.096$) with self-concept. The greater the distance moved, the poorer the self-concept. No significant correlation was found between self-concept and the recency of the last move. Kroger (1980) expressed the thought that the parental attitude toward relocation and towards the child's self-concept may mediate the correlation between moving and self-concept.

Martinez, Magliery, and Wair (1981) hypothesized that the number of moves a child made would relate positively to Machiavellianism. They administered the Nachamie Kiddie Mach Scale to 57 girls and 44 boys who were 16 and 17 years old. They found no significant relationship between number of moves and the manipulative propensity, called Machiavellianism. There was a slight correlation for this trait and mobility.

Barrett and Noble (1973) surveyed a group of nonmilitary families who moved into the Louisville, Kentucky, area from a distance greater than 50 miles. The parents of these 159 families, which included 318 children, aged 3 to 18, completed a questionnaire and the Louisville Behavior Check List (LBCL). The reason most often given for moving was employment.

The questionnaire sent to the parents dealt with the reason for the move, attitudes of family members towards moving, current satisfaction with Louisville, the adjustment of family members to the move, and the adults' judgment of the impact that moving had on each of the children. The parents also filled out the LBCL, a 163-item checklist. This instrument was originally constructed to evaluate the disorders of children referred to a clinic, but has since been standardized over a normal population. The subscales for the LBCL are aggression, inhibition, learning disabilities, and total disability.

In their responses to the questionnaire, parents reported that about 25% of the children found the school change difficult. When asked for a global assessment of how the move affected children, parents answered that there were "no" or "good" effects for 81% of the children, "mixed" for 6%, and "bad" for 13%.

As measured by the LBCL, mobile children did not differ statistically from a normative population on any subscale or on the total scale. There was a correlation between recency of move and the total score, with those moving most recently showing some disturbance. The writers indicate that the degree of disturbance, while larger within six months of a move, remains less than that found in the general population. They also stated that the effect dissipated rather quickly (Barrett & Noble, 1973). The population studied was a selective one and the results may not be generalizable to other groups.

Keat, Crabbs, and Crabbs (1981) found that a program of intervention for new families coming into a school district was needed. They described these children as withdrawing, dependent, feigning illness, and manifesting other defensive behaviors.

Feldbaum et al. (1980) painted a picture of the newcomer in the preschool as showing signs of stress and ambivalence. The writers told of children becoming immobile, tight-muscled, averting their eyes, rocking, and fidgeting. These children usually went through stages of introduction into the routine and became well integrated. However, this process of adjustment lasted at least a month for boys and several more weeks for girls.

Impact of mobility on peer relationships

Rakieten (1961) surveyed elementary-school students about their concerns related to moving. The children reported feelings of apprehension about attending a new school. They were most concerned about peer acceptance, not about academic expectations. Few of the students recalled receiving any assistance in making friends or in getting to know other children. The students said they would have preferred an orientation time when they could observe their peers.

In the most recent large-scale study of the effects of mobility on families, Brett (1982) found that mobile families were generally more satisfied with their lives, families, and marriages than were nonmobile families. However, she found that the only data which consistently separated the mobile families with the nonmobile families was their dissatisfaction with social relationships. This held true for the adults as well as the children. The quality of friendships for children was inversely correlated with mobility.

Mobile children had more difficulty establishing friendships than nonmobile children. Teenagers were reported having concerns related to missing old friends. Brett wrote that of all the data collected in her study, those on children were the weakest technically because they were based on reports from the parents. She expressed the wish that future research elicit responses directly from children (Brett, 1982).

Barrett and Noble (1973) studied a population similar to Brett's (1982). Their research also asked the parents about the children's friendship experiences. The parents replied to the question of whether or not their children made friends easily, reporting that 80% did. The children aged 6 to 10 were reported as making friends easier (90%) than children aged 11 to 18 years (69%). On the Louisville Behavior Check List, on the sub-scale of social withdrawal and scale of inhibition, the mobile children were rated more positively than the normative population.

In a survey reported by Smardo (1981), six-year-old children said that the best part about moving was going to a new school (33%), making new friends (33%), traveling (28%), and learning about a new place (6%). They declared that the worst part about moving was leaving friends (84%), leaving an old school (11%), and making a change (5%).

The children described by Stubblefield (1955) indicated that peer relationships were critical at the time of transferring from one school to another. Two of the children he treated described daydreams and fantasies of former friends. It was proposed that the common factor shared by children who had disturbances at the time of moving was a usually temporary impairment in their capacity to make effective contact with other people.

Magnus and Dodd (1981) quoted a counselor who worked with mobile families as suggesting that teenagers in the junior and senior years of high school could be adversely affected by transferring schools. She felt that this was due to a feeling of loss of self in terms of peer support, necessary for self esteem. This could cause defiant behavior directed at the parents or social withdrawal from social contact.

In one of the few studies relating to moving and its effect on peer relationships which elicited responses directly from the students themselves, Donohue and Gullotta (1983) questioned high school students who had recently moved. Most of the parents of these students held management, professional, or skilled laborer positions. The average number of moves reported was 4.8 times, with some transferring as many as 14 times.

Forty-one students were asked to complete a modified version of the Spouses' Coping Inventory, first developed for work with wives dealing with separation. A series of behaviors were listed and the respondents were to designate which of these were not helpful, minimally helpful, moderately helpful, or very helpful. Thus, the instrument was used to discover what methods were of most assistance in dealing with the stress of moving. Not surprisingly, the coping behaviors seen as most beneficial were those in the category of "establishing supportive relationships and friendships" (p. 396). The number of students who took part in this study was small. It would seem useful to expand this type of investigation further and to other ages so that assistance could be given to teach the most helpful skills to those who are about to move or who have already done so.

Impact of mobility on attendance

When families move during the school year, it is common for children to miss some days of school. This can be due to such things as time of actual travel, settling in and unpacking necessities in the new home, and gathering the required local forms, medical exams, and immunizations. Very little investigation has been undertaken to determine a further, longer lasting effect of mobility on attendance.

School attendance is a factor important to study because it has been linked with other indices of school success, such as academic advancement and whether or not a student will drop out of school (National Education Association, 1967).

Felner et al. (1981) compared the grades and attendance figures of 250 high school students in a northeastern city on the basis of number of schools attended. They found no significant associations overall between number of transfers and number of school absences. However, when broken down by sex and race, the number of schools attended and number of absences was significant for white females ($r = .324$, $p < .05$, $n = 26$), and almost so for black females ($r = .157$, $p < .09$, $n = 76$). No significant relationship was found for boys of either race.

When Greene and Daughtry (1961) examined the records of 434 eleventh-grade students in Georgia, they discovered that students who had made a larger number of moves had fewer than average absences from school. Attendance was not associated with recency of moves or distance of moves.

In a study comparing various methods of orientation for transferring elementary school students, Sloan, Jason, and Bogat (1984) found no correlation between different interventions (including no orientation) and number of absences. They concluded that, for the students with whom they worked, attendance did not seem to be affected by changing schools.

According to behavioral observations by Crabbs and Crabbs (1980) and Stubblefield (1955), attendance would seem to correlate with moving. Crabbs and Crabbs (1980) reported that new students often feigned illness and adopted other defensive behaviors designed to enable the children to avoid attending school. Stubblefield (1955) described a child who developed school phobia after moving. This child required therapy in order to become able to attend school regularly.

Further knowledge in this area seems necessary. If mobile children have poorer attendance than nonmobile children, prompt intervention would be critical. Students who are not attending school will not achieve academically, nor will they become integrated into the school community.

Impact of mobility on participation in exceptional student education classes

Students who have significant learning or emotional deficits are served in exceptional student educational programs such as those for specifically learning disabled, emotionally handicapped, and educably mentally handicapped. Other special classes are structured for those with speech and language difficulties. Students who have exceptional abilities are often taught in gifted education programs.

When children move from school to school it is possible that the different materials and methods used in the new situation could cause a student to exhibit learning problems. For example, a student may have learned to solve long division problems using one method and may become confused in trying to understand another approach. Reading texts build from one level to the next by using a basic vocabulary. When a student who has formerly used a different series enters school, it may appear that the child has fewer reading skills.

deNomme and Wells (1981) have labeled the deficits displayed by transferring students as Transciency-Affected Developmental Syndrome (TADS). They contended that students who had been in several schools in the early years were likely to display characteristics of learning disabled students when, in fact, they were exhibiting TADS. They found there was a higher number of referrals of transient students to the school psychologists to determine eligibility for placement in exceptional student education classes.

Panagos et al. (1981) also reported that in the case of inner-city mobile students, a common practice was placement in remedial and/or special education classes. They wrote of an alternative program for these children which, although not formally labeled as special education, helped the transient students through use of a resource program.

Kelly (1984) presented the issue of mobility and exceptional student education in a different light. She revealed the kinds of delays and difficulties a student who has special needs faced when transferring from school to school. Each district was reported to have distinct forms and processes necessary to obtain needed extra services. According to her contentions, it would seem that mobile children would be underrepresented in exceptional student education classes.

On the other hand, some researchers (Evans, 1966; Morris et al., 1967; Perrodin & Snipes, 1966; Whalen & Fried, 1973) have determined that the varied experiences of living in different environments seemed to enrich a student's background and increase achievement. Therefore, it could be that, for certain segments of the population, high mobility would be associated with placement in gifted education. No data were discovered in this area.

Impact of mobility on students' attitudes about school

Very limited empirical data were found comparing mobile and nonmobile students' attitudes about school. It would seem that for those who found moving a stressful experience, their attitudes about school would be negatively affected.

Sloan et al. (1984) administered the School Sentiment Inventory to 87 students aged 6 to 14 years before and after participation in four different orientation programs. This questionnaire included 37 items answered either positively or negatively. There were five subscales on attitudes about teachers, school subjects, school structure and climate, peers, and a general estimate of school attitudes. The authors did not compare the results of the first administration with results from a normative population. They did, however, indicate that students' attitudes about school improved over time. They also showed that certain kinds of orientation activities seemed to change attitudes toward school subjects in a positive direction.

Brett (1982) found no published research describing how mobile children like school. She suggested that transferring likely impacted a child's experiences and attitudes "making it difficult to work through problems at school (if the child has problems) or enjoy the benefits of success at school (if the child does well)" (p. 452).

Similarly, Whalen and Fried (1973) maintained that "interests and attitudes have a direct relationship on children's performance. It is reasonable to suppose that mobility is a factor that can influence interests and attitudes and, consequently, performance" (p. 163).

If these writers were correct in their assumptions, and attitude toward school does, in fact, correlate with achievement, then it would seem appropriate to ascertain any statistical differences between mobile and nonmobile students in regard to attitudes about school.

Summary

Moving from one residence to another has been a common practice in America since the colonists first arrived. People continually explored and settled in new regions of the country. Moving up, searching for the American dream, meant moving out.

Most social scientists agree that moving is a stressful life experience. Even when the change is made to upgrade housing or job, the transition to a new environment is often disruptive.

There are disagreements about the possible long-term effects of mobility on families. However, the evidence concerning negative impacts surrounding the time of the actual move is convincing.

When children transfer from one school to another there is a discontinuity in the academic areas as well as the social and emotional arenas. There has been little direct research done to determine what happens to children when they move. In studying several indicators of children's development such as achievement, attitude, adjustment, peer relationships, and other school-related dimensions, perhaps it can be determined if there are any differences between those who move and those who do not.

CHAPTER III
METHODOLOGY

The purpose of this study was to investigate the differences between mobile and nonmobile students in terms of reading achievement, peer relationships, attitude about school, school adjustment, school attendance, and placement in exceptional education. The population, sample, and sampling procedure are described in this chapter. The research design, hypotheses, instrumentation, data collection procedures, and the method for analyzing the data are also reported.

Research Design

This investigation was a descriptive study. A population and sample were chosen. Relevant measures were selected. Data were systematically collected and analyzed. This study characterized, compared, and contrasted mobile and nonmobile students in terms of reading achievement, peer relationships, attitude about school, school adjustment, school attendance, and exceptional student education placement.

Population

The population for this study consisted of 503 fifth-grade mobile and nonmobile students attending elementary schools in Alachua County, Florida. Alachua County is located in north central Florida, 50 miles from the Gulf of Mexico and 60 miles from the Atlantic Ocean. Approximately 42% of the workers are employed by government--local, state, and federal. The University of Florida, located in the city of Gainesville, is the largest single employer. Santa Fe Community College and a Veterans Administration Hospital are also located in Gainesville, the county seat of Alachua County.

Agriculture is a significant industry in Alachua County. Companies which produce forest products are the largest landholders in the county. Cattle and vegetable and fruit farms are numerous (Gainesville Area Chamber of Commerce, 1985).

The population of Alachua County in 1940 was 38,607. By 1960, the population had grown to 75,304, an increase of 95%. The total number of persons in the county in 1980 was 151,348. The projected number of residents in 1985 was 174,651. For the years 1995 and 2000, the estimates are 221,224 and 244,516, respectively. Thus, the county has increased in population by 136,044 or 352% in the last 45 years with a projected growth rate of 40% in the next decade (Gainesville Area Chamber of Commerce, 1984). The area is considered a highly mobile one for families because of the university community, recent school rezoning plans, and its appeal to out-of-state people who are looking to relocate in the southeast or Florida.

In December, 1985, there were 22,761 students attending public schools in kindergarten through twelfth grades in Alachua County. In grades kindergarten through five, there were 10,496 pupils. There were 20 elementary schools in the district (J. Hill, personal communication, December 17, 1985).

Sample

Of the 20 public elementary schools in Alachua County, 4 schools were eliminated from consideration for the study. Two had just begun operating during the 1985-1986 school year and a nonmobile student population was thus nonexistent. Two other elementary schools had students only through the fourth grade and this study focused on fifth-grade elementary school students.

The investigator applied to conduct the research in the remaining 16 elementary schools. Principals in 14 schools approved the request to gather information in their respective schools. One of these schools was subsequently eliminated from the study because the data could not be gathered before the end of the school year. All counselors in the participating schools then surveyed school records to determine the names of students who had attended three or more schools and those students who had attended only one school. Those who had attended three or more schools were classified as mobile students. Those who had attended only one school were classified as nonmobile. Those who had attended only schools in Alachua County were classified as in-county mobile students. Those who had attended three or more schools with at least one outside Alachua County were classified as out-of-county mobile students.

All mobile and nonmobile students in the fifth-grade in 13 schools were invited to participate in the study. The parents of the students were sent a letter (see Appendix A) explaining the purpose of the study and asking consent for their child's participation in the study. The consent form also enabled counselors and the investigator to verify the mobility and nonmobility categories of the sample. Of 503 parents, 54% gave permission. Thus there were 131 mobile and 143 nonmobile students in the sample. Demographic information on the students in the sample is presented in Table 3-1.

Hypotheses

There were six primary null hypotheses in this study, involving six major dependent variables. There were four moderator variables which were considered in the testing of hypotheses and analysis. The .05 level of significance was the minimum for rejection of the null hypothesis.

Ho 1. After removing the effects of race, socioeconomic status, sex, and marital status of parents,

Table 3-1

Demographic Information on the Fifth-Grade Students Who Participated in the Study

Category	N	%
Race		
White	194	70.8
Nonwhite	80	29.2
Sex		
Male	118	43.1
Female	156	56.9
Socioeconomic status		
Lower	101	36.9
Higher	173	63.1
Family structure		
Divorced, Separated, Loss of Parent Through Death	120	44.3
Intact	151	55.7
Mobility		
Nonmobile	143	52.2
Mobile-in-County	54	19.7
Mobile-Out-of-County	77	28.1

there is no significant difference between mobile and nonmobile students regarding reading achievement, as measured by the Metropolitan Achievement Test.

Ho 2. After removing the effects of race, socioeconomic status, sex, and marital status of parents, there is no significant difference between mobile and nonmobile students regarding school adjustment problems, as measured by the Walker Problem Behavior Identification Checklist.

Ho 3. After removing the effects of race, socioeconomic status, sex, and marital status of parents, there is no significant difference between mobile and nonmobile students regarding peer relationships, as measured by the Peer Relationship Inventory.

Ho 4. After removing the effects of race, socioeconomic status, sex, and marital status of parents, there is no significant difference between mobile and nonmobile students regarding days absent, as determined by attendance data from school registrars.

Ho 5. After removing the effects of race, socioeconomic status, sex, and marital status of parents, there is no significant difference between mobile and nonmobile students regarding participation in exceptional student education classes.

Ho 6. After removing the effects of race, socioeconomic status, sex, and marital status of parents, there is no significant difference between mobile and nonmobile students regarding students' attitude about school, as measured by the Battle Student Attitude Scale.

Instruments

Reading Achievement

Reading achievement was measured using the Metropolitan Achievement Test, Intermediate Level, 1978 edition. This edition is the fifth revision of the Metropolitan Achievement Test. The first edition in the series was developed during the early 1930s and was based on a New York City course of study. A battery of tests for use nationally was released in 1932. The tests were revised and expanded over the next few years. By 1937, students from all over the nation had taken part in the experimental and standardization process (Prescott, Balow, Hogan, & Farr, 1978).

Revised editions were published in 1947, 1958, and 1970. The sampling procedures were improved and extended with each new form. Additions in the reporting of test results, such as standard scores and stanines, were also made.

The 1978 tests benefited from all previous improvements. Additionally, the most significant innovation was a two-component system which made possible the evaluation of large groups of students and provided detailed prescriptive information about an individual student's basic competence in reading, mathematics, and language (Prescott et al., 1978).

The Metropolitan Achievement Test was given every spring in Alachua County district schools in grades kindergarten through 10. In grades kindergarten through four, students marked their answer directly in the test booklet. In grades 5 through 10, responses were made on separate answer folders. All tests except those given to kindergarten students were machine scored.

Fifth-grade students in all elementary schools in the district were administered the intermediate level of the Metropolitan Achievement Test. This consists of a series of tests in the areas of reading, mathematics, language, science, and social studies. For the reading, mathematics, and language sections, 50 minutes are allocated for each session. Science and social studies are tested in 45-minute sessions each. The entire battery is given over a three-day period. Students were tested in their classrooms with teachers serving as test administrators. The reading subtest of the Metropolitan Achievement Test is a group test administered as a silent reading inventory. It consists of 11 graded passages, each followed by multiple choice questions appropriate to the reading level of the passage.

For example, the intermediate level contains passages at six reading levels from grade 3 through grade 10. There are five or six questions at the end of each passage.

Students are permitted to refer to the passages to answer the questions, but it is a timed test, lasting 50 minutes.

The content validity of the Metropolitan Achievement Test has been determined by correlating the compendium of instructional objectives of the test with the Alachua County curriculum scope and sequence plans and objectives. The Metropolitan Achievement Test were considered a valid and reliable indicator of academic achievement by district and school-level personnel, as well as by many other school districts.

For the reading subtest of the Metropolitan, the Kuder-Richardson Formula 20 reliability estimate was .95. The standard error of measurement for the raw score was 3.2 (Prescott et al., 1978).

The reading achievement subtest yields a raw score, a scaled score, national and local percentile ranks, national and local stanines, and a grade equivalent score. In this study, the scaled scores were used for analysis.

The school counselor or designee in each participating school collected the reading achievement score of each identified student. This information was obtained from a computer-generated test data sheet available for each classroom teacher. The counselors were provided a report sheet on which to record the scaled scores for each student in the study.

Each fifth-grade student in the school district took the Metropolitan Achievement Test in April, 1986. The results were reported one month later and made available for analysis.

Attitude About School

Students' attitudes toward school were measured with the Battle Student Attitude Scale. This paper-pencil instrument is designed to assess attitudes toward self, other students, teachers, school administrators, and the school as a whole (Damico, Hines, & Northrup, 1975).

The first form of the Battle Student Attitude Scale was based on instruments by Philips (1951) and Lyman (1941). Battle (Damico et al., 1975) constructed a 60-item scale which assessed attitudes toward self, other students, teachers, administrators, and the school as a whole. Each item was stated in the negative. For example, "I feel that none of the teachers grade fairly" and "I believe there are too many rules in this school" are items included in the scale. Students responded using a three-point scale worded as "mostly false," "sometimes," and "mostly true."

The validity for the secondary school-level form was obtained by correlating it with Lyman's and Philip's instruments which were reported to be measuring the same things. Additionally, the results of the Battle Student Attitude Scale were judged for validity by the students' teachers and a research team which knew the pupils and the situation. The results correlated highly with the teachers' judgments of individual pupil's attitudes. The scale also discriminated among classes and schools in such a way as to correspond with judgments of a research team which had worked in the schools for a year. Several odd-even split-half reliabilities were calculated and these ranged from .88 to .94. These figures have been considered fairly high for this type scale (Damico et al., 1975).

The elementary form of the Battle Student Attitude Scale was developed from the original secondary form. Each item from the first form was rewritten and checked for appropriateness for upper elementary age children.

In order to validate the elementary school form, several classes of sixth graders were first given the secondary form. A few days later, these same students were given the elementary school form. The scores on the two forms were correlated. An iterative bidimensional item analysis was performed which correlated each item on the elementary form with the total score made by the student on the secondary form. This process yielded acceptable items for the final form of the elementary scale (Damico et al., 1975).

The reliability of the Battle Student Attitude Scale elementary form was estimated by using the split-halves method. The range was calculated to be from .85 to .88 (Damico et al., 1975).

The Battle Student Attitude Scale consists of 58 items. Students are asked to respond by indicating if the statement is MT for mostly true or true, S for half-true and half-false, or MF if the statement is mostly false or false. An example of the items included is "The teachers expect too much of me."

In this study, the students were administered the elementary form of the Battle Attitude Scale in a group. All fifth-grade students in the study, both mobile and nonmobile, were given the inventory together in their respective schools. The counselor in each school read each statement aloud and the students indicated their responses to each item by marking directly on the instrument.

On each item marked MF (mostly false or false) the student received three points. Each question marked S (sometimes false and sometimes true) was scored as two points and MT (mostly true or true) was given as one point. Omitted questions were scored at two points each. A total score was calculated by summing the points for all items. The higher the total, the more positive the attitude toward school.

The scale is constructed of questions covering attitudes toward self, other students, teachers, administrators, and the school as a whole. These subscales can be scored separately. Comparisons can also be made between sections by dividing subtest scores by the number of items in a particular section. In this study, the total score was used for analysis.

School Adjustment Problems

School adjustment problems were assessed using the Walker Problem Behavior Identification Checklist (WPBIC). This paper-pencil instrument was developed by Hill Walker (Walker, 1970, 1976, 1983) to identify children with behavior problems.

The WPBIC is composed of 50 observable and operational statements. An example of an item is "Does not complete tasks attempted." The classroom teacher responds to each item by indicating a degree of agreement by using numbers in the right column. This enables teachers to report whether or not the behavior has been observed as part of a child's response pattern during the last two-month period.

The instrument is scored by adding the numbers circled to the right of the items. If a male student receives a score of 22, he is classified as disturbed. If a female receives a score of 12 or higher, she is classified as disturbed (Walker, 1970, 1976, 1983).

The manual indicates that a student's scores should also be examined according to five categories of responses. A profile analysis chart is included with the test.

The five categories were identified by a varimax orthogonal rotation factor analysis. Normative data were obtained from a sample of 534 pupils. The factors are (a) Acting-Out (disruptive, aggressive, defiant); (b) Withdrawal (restricted functioning, avoidance behavior); (c) Distractibility (short attention span, inadequate study skills, non-attendance); (d) Disturbed Peer Relations (inadequate social skills, negative self-image, compulsive); and (e) Immaturity (dependent) (Walker, 1970, 1976, 1983).

On the construct of behavior disturbance, contrasted-group validity for the WPBIC was established by defining and comparing two independent groups of students. Using nontest criteria, 38 out of 534 students were identified as behaviorally disturbed. These students were matched with 38 students from the normative sample who were identified as disturbed. The difference between the means of the groups was significant beyond the .001 level of confidence.

The reliability of the WPBIC was estimated by the test-retest method and the Kuder-Richardson split-half method. The Kuder-Richardson procedure yielded a coefficient of .98 with a standard deviation of 10.53 and a standard error of measurement of 1.28. Studies which reported test-retest stability were given in the manual. These coefficients ranged from .80 to .86 (Walker, 1970, 1976, 1983).

Peer Relationships

The Peer Relationship Inventory (PRI) is an instrument designed by the investigator to measure upper-elementary students' perceptions of their social relationships and skills. A copy of this survey appears in Appendix B. There are 30 items which are answered using a Likert-type scale of strongly agree, agree, unsure, disagree, and strongly disagree.

The first step in the development of the PRI was the identification of five variables related to peer relationships. These variables were identified after a review of the professional literature, consultation with educators, and the investigator's experience with children. The categories were leadership, social confidence, satisfaction with role, problems response, and sharing.

Specific items were written for each category on the inventory and randomly ordered. They were then submitted to 30 counselors and teachers. These professionals were instructed to judge each statement according to the applicability of each to the area of peer relationships. They were also asked to indicate any items which would not be understood by fifth-grade students. Items which were not agreed upon as relevant or comprehensible to students by 90% of the professional group were rejected.

The reliability of the PRI was then examined by performing a test-retest correlation study. The PRI was administered to 109 children from four fifth-grade classrooms. One week later it was readministered. These students were from a school which was not participating in the study. A Pearson r of .75 was obtained.

Personality tests, interest inventories, and other like instruments usually have test-retest coefficients in the .70-.80 range (Noll, 1965). The reliability of the PRI might therefore be considered average for instruments of its kind.

The total score on the PRI was obtained by adding the points for each item. Points for those items worded positively are as follows: one point for responses designated as strongly disagree, two points for disagree, three points for unsure, four points for agree, and five for strongly agree. For those items worded in the negative, points were awarded as follows: five points for strongly disagree responses, four points for disagree, three points for unsure, two points for agree, and for all responses of strongly agree, one point each was calculated.

Other Variables

Socioeconomic Status

The socioeconomic status of students was determined by reviewing school records to note eligibility for federal assistance for the school breakfast and lunch programs. Those students whose family income and size enabled them to receive free or reduced meals at school were classified as lower socioeconomic status. Those who were required to pay the full price for school meals were classified as higher socioeconomic status. This method of classification is common in determining which schools and school districts are eligible for other federal assistance and programs.

School Attendance

School attendance at every school in the district was entered into the district main frame computer data base daily. Each six-weeks grading period a computer printout was sent to every school indicating the days absent and present for every student. The counselor or designee used this information to record absences for each child participating in the study.

Placement in Exceptional Student Education Classes

When a student was found to meet the eligibility requirements for placement in an exceptional student education class, a staffing conference was held. After parent permission was obtained, the student was placed in the appropriate program. The student's records were then flagged with a color-coded tag indicating the program in which the child has been placed. The counselor or designee at each school participating in the study surveyed the school records and recorded the classes to which the students in the study were assigned.

Reasons for Moving

In order to find out why the mobile students' families had moved, thus necessitating a change of schools, parents were asked to respond on the parent permission letter to the open-ended question, "What was the main reason for moving?" (see Appendix A).

Data Collection Procedures

1. The investigator applied to conduct the study in the 16 elementary schools eligible to participate in the study. Of these schools, permission was granted to gather data in 14 schools.

2. The counselors in the 13 participating schools received a research packet which contained (a) Walker Problem Behavior Identification Checklists, (b) Battle Student Attitude Scales, (c) Peer Relationship Inventories, (d) parent consent letters, and (e) student information sheets on which data were entered.

3. The counselor or a designee in each school used the school records to compile a list of mobile and nonmobile students. The counselors provided the investigator the lists.

4. The school counselors sent consent forms to parents of the students on the lists. On these forms, the parents were asked to provide information concerning the reasons for moving their children to a different school and the extent of their moves.

5. Upon receipt of the consent forms, school counselors or their designees examined school records to obtain additional information: sex, race, socioeconomic status, marital status of parents, and number and kinds of

moves. Attendance data and reading achievement scores were collected from computer printouts. All of the information was entered on the student information sheets.

6. The mobile and nonmobile students within each school were assembled together in a central testing area such as the media center, cafeteria, or auditorium. The counselors read the Battle Student Attitude Scale and the Peer Relationship Inventory to the students as they responded, per instructions, by writing directly on the instruments.

7. During the same week, the counselors distributed the Walker Problem Behavior Identification Checklists to the teachers of the identified students. The teachers completed the forms and returned them to the counselors. The teachers were not told about the specific nature of the study. They did not know that student mobility was being investigated.

8. Each counselor collected the student surveys, the teacher checklists, and the student information sheets and returned them as a packet to the investigator in a return envelope.

9. The data were coded, keypunched, and analyzed.

Analysis of Data

The main independent variable in this study is mobility. This is a categorical variable with three conditions or levels: nonmobile, mobile within Alachua County, and mobile with at least one of the schools attended located outside Alachua County.

There are six main dependent variables: reading achievement, attitude about school, peer relationships, school attendance, adjustment problems, and placement in exceptional student education. Reading achievement, an interval variable, was measured on a standardized achievement test. Students' attitudes about school were measured by using a standardized questionnaire. Peer relationships were measured on an inventory completed by the students. Attendance is defined as the number of days absent during the first five six-weeks grading periods. This is also an interval variable. Adjustment problems were ascertained by using a checklist completed by the teachers. Placement in ESE classes, a categorical variable, was determined through a review of the school records.

The moderator variables are all categorical variables. They are race, socioeconomic status, sex, and the marital status of the parents.

One regression equation was calculated for each dependent variable. Each regression equation had one dependent variable and numerous "independent" variables--the main independent variable and the moderator variables. All the moderator variables were entered first into the regression equation. The variable of mobility was entered into the regression equation as the last variable.

CHAPTER IV
RESEARCH FINDINGS

The purpose of this study was to investigate the differences between mobile and nonmobile students in terms of reading achievement, peer relationships, attitude about school, school adjustment problems, school attendance, and placement in exceptional education classes. These variables were measured using the Metropolitan Achievement Test (MAT), the Peer Relationship Inventory (PRI), the Battle Student Attitude Scale, the Walker Problem Behavior Identification Checklist (WPBIC), school-registrar data giving the number of days absent during the first 150 days of school, and school records concerning exceptional student education (ESE), respectively.

Data were collected on 274 fifth-grade students from 13 Alachua County public elementary schools. Descriptive data concerning the six dependent variables appear in Tables 4-1 and 4-2.

In order to isolate the effects of the main independent variable, student mobility, from the effects of the four moderator variables (sex, race, socioeconomic status, and marital status of parents) six multiple regression analyses were calculated. The moderator variables were entered into

Table 4-1

Total Student Group Means and Standard Deviations for the Metropolitan Achievement Test, Walker Problem Behavior Identification Checklist, Peer Relationship Inventory, Battle Student Attitude Scale, and Days Absent

Variable	N	Mean	SD	Minimum	Maximum
MAT	271	735.99	73.74	525.0	927.0
WPBIC	274	8.20	9.93	0.0	58.0
PRI	270	102.24	15.80	60.0	138.0
BSAS	269	125.29	18.40	77.0	166.0
Days Absent	274	6.02	5.84	0.0	33.0

Note: Complete information was not available for each student.

Table 4-2

Participation in Exceptional Student Classes of Fifth-Grade Students in the Study

Class	N	%
Regular Education	213	77.7
Gifted	46	16.8
Specific Learning Disabilities	10	3.7
Emotionally Handicapped	5	1.8

the equations first so that the effects of the main variable, mobility, could be determined.

Reading Achievement

Ho 1. After removing the effects of race, socioeconomic status, sex, and marital status of parents, there is no significant difference between mobile and nonmobile students regarding reading achievement, as measured by the Metropolitan Achievement Test.

Through multiple regression analysis, it was shown that the moderator variables of race, sex, socioeconomic status, and marital status of parents accounted for 22.5% of the variance found in the scaled scores of the reading achievement test. The data in Table 4-3 show that when mobility was added to the analysis, the results indicated that the variables again formed a significant model [$F(6, 261) = 12.98$, $p < .0001$]. The variance in reading scores accounted for with the addition of mobility as a variable increased to only 23%. Mobility did not add significantly to the explanatory power of race, sex, socioeconomic status, and the marital status of parents. Therefore, the null hypothesis relating to reading achievement was not rejected.

Race and socioeconomic status are significant predictors of reading scores ($p < .0001$). White students and higher socioeconomic status students would, on the

Table 4-3

Regression Model of the Relationship Between Reading Achievement, Four Moderator Variables, and Mobility

Parameter	Estimate	t for Ho: Parameter = 0	PR> of t	Std. Error/ Estimate
Intercept	718.98	57.13	0.0001	12.58
Race	-42.18	-4.10	0.0001	10.29
Sex	6.78	0.83	0.41	8.14
Socioeconomic Status	42.64	4.40	0.0002	9.70
Family Structure	-0.03	-0.00	0.99	9.48
Mobile-Out-of-County	2.69	0.27	0.79	9.96
Mobile-in-County	-11.45	-0.97	0.33	11.82

F (6, 261) = 12.98
p < .0001
R-square = .23
Mean Reading Score = 736.36

average, score 42 and 43 points higher, respectively, than nonwhite and lower socioeconomic students. As previously mentioned, the mean of the scaled score on the MAT was 735.99 (SD = 73.74).

School Adjustment Problems

Ho 2. After removing the effects of race, socioeconomic status, sex, and marital status of parents, there is no significant difference between mobile and nonmobile students regarding school adjustment problems, as measured by the Walker Problem Behavior Identification Checklist.

The variables of race, sex, socioeconomic status, and marital status or parents accounted for 14% of the variance of scores on the WPBIC. An additional 1% of the variance was accounted for when mobility was added to the analysis (see Table 4-4). The moderator and main variables form a significant model [F (6, 264) = 7.89, $p < .0001$]. Since mobility did not add significantly to the explanatory power of the moderator variables, the null hypothesis concerning school adjustment problems was not rejected.

However, race, sex, and the students' socioeconomic status were found to be significant predictors of the school adjustment problem scores. The average nonwhite student scored 2.8 points higher than the average white student ($p < .05$). Girls scored, on the average, 2.6 points lower

Table 4-4

Regression Model of the Relationship Between School Adjustment Problems, Four Moderator Variables, and Mobility

Parameter	Estimate	t for Ho: Parameter = 0	PR> of t	Std. Error/ Estimate
Intercept	11.53	6.51	0.0001	1.77
Race	2.81	1.94	0.05	1.46
Sex	-2.62	-2.29	0.02	1.14
Socioeconomic Status	-3.68	-2.70	0.007	1.36
Family Structure	-2.19	-1.64	0.10	1.33
Mobile-Out-of-County	2.64	1.88	0.06	1.40
Mobile-in-County	1.10	0.67	0.50	1.64

F (6, 264) = 7.89
p < .0001
R-square = .15
Mean WPBIC Score = 8.29

than boys ($p < .02$). Lower socioeconomic statusstudents scored 3.7 points higher than higher socioeconomic status students ($p < .007$). A higher score on the WPBIC indicates more school adjustment problems, as rated by teachers.

Peer Relationships

Ho 3. After removing the effects of race, socioeconomic status, sex, and marital status of parents, there is no significant difference between mobile and nonmobile students regarding peer relationships, as measured by the Peer Relationship Inventory.

The variables of race, socioeconomic status, sex, and marital status of parents did not form a significant model related to peer relationships [$F(4, 264) = 1.96$, $p < .10$]. When mobility was included in the regression analysis, as seen in Table 4-5, the results again were not statistically significant [$F(6, 262) = 1.73$, $p < .11$]. Thus, the null hypothesis was not rejected.

School Attendance

Ho 4. After removing the effects of race, socioeconomic status, sex, and marital status of parents, there is no significant difference between mobile and nonmobile students regarding days absent as determined by attendance data from school registrars.

Table 4-5

Regression Model of the Relationship Between Peer Relationships, Four Moderator Variables, and Mobility

Parameter	Estimate	t for Ho: Parameter = 0	PR> of t	Std. Error/ Estimate
Intercept	101.06	33.69	0.0001	3.00
Race	1.60	0.65	0.52	2.46
Sex	-1.22	-0.63	0.53	1.94
Socioeconomic Status	5.21	2.25	0.03	2.31
Family Structure	-0.39	-0.17	0.86	2.27
Mobile-Out-of-County	-3.43	-1.44	0.15	2.38
Mobile-in-County	-3.30	-1.18	0.24	2.80

F (6, 262) = 1.73
p < .11
R-square = .04
Mean PRI Score = 102.29

Through multiple regression analysis, it was found that the moderator variables of race, sex, socioeconomic status, and marital status of parents accounted for 5% of the variance shown in the days absent by the students for the first 150 days of school. When the main independent variable, student mobility, was entered into the regression analysis an additional 1% of the variance was accounted for. A significant model was formed (see Table 4-6). Mobility did not, however, add significantly to the explanatory power of the moderator variables. The null hypothesis concerning school attendance was not rejected.

Race and socioeconomic status were significant predictors of attendance. On the average, nonwhite students had two fewer days absent than white students. Higher socioeconomic status students also had two fewer absences than lower socioeconomic status students.

Participation in Exceptional Student Classes

Ho 5. After removing the effects of race, socioeconomic status, sex, and marital status of parents, there is no significant difference between mobile and nonmobile students regarding participation in exceptional student education classes.

Table 4-7 contains information regarding the placement of mobile and nonmobile students in exceptional education classes. In order to obtain the predictive power of the

Table 4-6

Regression Model of the Relationship Between School Attendance, Four Moderator Variables, and Mobility

Parameter	Estimate	t for Ho: Parameter = 0	PR> of t	Std. Error/ Estimate
Intercept	7.976	7.49	0.0001	1.06
Race	-1.94	-2.24	0.03	0.87
Sex	-1.05	-1.54	0.12	0.68
Socioeconomic Status	-1.95	-2.38	0.02	0.82
Family Structure	-0.19	-0.24	0.81	0.80
Mobile-Out-of-County	1.31	1.56	0.12	0.84
Mobile-in-County	0.24	0.24	0.81	0.99

F (6, 264) = 2.65
$p < .02$
R-square = .06
Mean Days Absent = 5.9

Table 4-7

Numbers and Percentages of Mobile and Nonmobile Students in Regular and Exceptional Student Education Classes

	Nonmobile		Mobile-in-County		Mobile-Out-of-County	
	n	%	n	%	n	%
Regular Education	105	72.7	46	85.1	62	80.5
Gifted	31	21.7	5	9.3	10	13.0
Specific Learning Disabilities	5	3.5	2	3.7	3	3.9
Emotionally Handicapped	2	1.4	1	1.9	2	2.6
Total	143		54		77	

moderator and independent variables in regard to placement in exceptional student education classes, three multiple regression analyses were conducted. One category (placement in classes for students with learning or behavior problems) was formed from the combination of those students placed in classes for those with specific learning disabilities (SLD) and those with emotional handicaps (EH).

The first analysis (Table 4-8) dealt with the prediction of whether a student was in regular education or gifted classes. A significant model was formed [F (6, 248) = 5.04, $p < .001$]. Mobility did not add to the predictive power. The significant predictors were race and socioeconomic status. White children and higher socioeconomic status children were more likely to be placed in gifted education classes.

The second regression analysis dealing with ESE placement explored the relationship between the independent variables and whether a student was in regular education or classes for students with learning and behavior problems (see Table 4-9). A significant model was formed [F (6, 248) = 3.89, $p < .001$]. Sex and socioeconomic status were found to be significant predictors. Males and lower socioeconomic status students were more likely to be placed in classes for students with learning or behavior problems. Mobility did not add to the explanatory power of these variables.

Table 4-10 contains the results from the regression analysis designed to test the predictive powers of the independent variables in determining whether a student is in

Table 4-8

Regression Model of the Relationship Between Regular Education, Gifted Classes, Four Moderator Variables and Mobility

Parameter	Estimate	t for Ho: Parameter = 0	PR> of t	Std. Error/ Estimate
Intercept	0.21	2.83	0.005	0.08
Race	-0.14	-2.43	0.02	0.06
Sex	-0.07	-1.51	0.13	0.05
Socioeconomic Status	0.15	2.65	0.008	0.06
Family Structure	0.02	-0.45	0.66	0.05
Mobile-in-County	0.07	-1.01	0.31	0.07
Mobile-Out-of-County	0.08	-1.43	0.15	0.06

F (6, 248) = 5.04
p < .0001
R-square = .11
Mean ESE = .18

Table 4-9

Regression Model of the Relationship Between Regular Education, Classes for Learning and Behavior Problems, Four Moderator Variables, and Mobility

Parameter	Estimate	t for Ho: Parameter = 0	PR> of t	Std. Error/ Estimate
Intercept	0.23	4.56	0.0001	0.05
Race	0.01	0.23	0.82	0.04
Sex	-0.07	-1.96	0.05	0.03
Socioeconomic Status	-0.12	-3.04	0.003	0.04
Family Structure	-0.06	-1.49	0.14	0.04
Mobile-in-County	-0.08	-1.72	0.09	0.05
Mobile-Out-of-County	-0.04	-0.98	0.33	0.04

F (6, 248) = 3.89
p < .001
R-square = .10
Mean ESE = .07

Table 4-10

Regression Model of the Relationship Between Gifted Classes, Learning and Behavior Classes, Four Moderator Variables, and Mobility

Parameter	Estimate	t for Ho: Parameter = 0	PR> of t	Std. Error/ Estimate
Intercept	0.71	6.24	0.0001	0.11
Race	0.17	1.36	0.18	0.13
Sex	-0.07	-0.94	0.35	0.07
Socioeconomic Status	-0.67	-6.55	0.0001	0.01
Family Structure	-0.03	-0.37	0.71	0.08
Mobile-in-County	0.06	0.59	0.56	0.11
Mobile-Out-of-County	0.19	2.21	0.03	0.08

F (6, 55) = 19.81
p < .0001
R-square = .68
Mean ESE = .26

classes for the gifted or classes for those with learning and behavior problems. Socioeconomic status and the out-of-county mobility category were found to be significant factors [F (6, 55) = 19.81, $p < .0001$]. Lower socioeconomic status students and out-of-county mobile students (those attending three or more schools with at least one outside Alachua County) had increased chances of placement in classes for learning or behavior problems rather than in classes for gifted students. Socioeconomic status was the stronger of the two predictors.

Students' Attitudes About School

Ho 6. After removing the effects of race, socioeconomic status, sex, and marital status of parents, there is no significant difference between mobile and nonmobile students regarding students' attitude about school, as measured by the Battle Student Attitude Scale.

When the moderator variables of race, socioeconomic status, sex, and marital status were analyzed using multiple regression analysis, 10.8% of the variance found in the scores on the Battle was accounted for. With the addition of mobility into the analysis, 11% of the variance was accounted for, a gain of only .2%. Though the variables formed a significant model [F (6, 261) = 5.57, $p < .0001$] mobility did not add to the explanatory power of the moderator variables (see Table 4-11).

Table 4-11

Regression Model of the Relationship Between Attitude About School, Four Moderator Variables, and Mobility

Parameter	Estimate	t for Ho: Parameter = 0	PR> of t	Std. Error/ Estimate
Intercept	122.35	36.48	0.0001	3.35
Race	-8.05	-2.93	0.004	2.75
Sex	4.80	2.21	0.03	2.17
Socioeconomic Status	5.06	1.96	0.05	2.58
Family Structure	0.89	0.35	0.73	2.53
Mobile-Out-of-County	-3.23	-1.21	0.23	2.66
Mobile-in-County	-1.03	-0.33	0.74	3.14

F (6, 261) = 5.57
$p < .0001$
R-square = .11
Mean Battle Score = 125.35

White students scored 8.05 points higher than the average nonwhite student ($p < .003$). Female students scored, on the average, 4.8 points higher than did male students ($p < .03$). Higher socioeconomic status students received scores 5.1 points greater than the average lower socioeconomic status students ($p < .05$). A higher score on the Battle indicates a more positive attitude towards school.

Post Hoc Analyses

Through multiple regression analysis, it was determined that mobility did not add significantly to the explanatory powers of the moderator variables (race, socioeconomic status, sex, and family structure) in relation to reading achievement, school adjustment problems, peer relationships, school attendance, placement in exceptional student education classes, and attitude toward school. However, as previously reported (Bogue, 1985; Lacey & Blane, 1979; Miller, 1977; Shumaker & Stokols, 1982), there is evidence to support the notion that mobility is correlated with the moderator variables studied. Table 4-12 shows the significant Pearson correlation coefficients relating the dependent variables with the moderator and main independent variables. These results show that the moderator variables were significantly interrelated. Race is related to socioeconomic status, family structure, and both categories of mobility. Socioeconomic status was related to family

Table 4-12

Significant Inter-Correlations Among the Moderator Variables, Mobility, and the Dependent Variables

Variables	1	2	3	4	5	6	8	9	13
1. Race									
2. Sex									
3. WPBIC	.24	-.15							
4. Battle	-.27	.14							
5. PRI									
6. Attendance									
7. ESE									
8. MAT	-.40								
9. Fam. Struct.	-.29		-.25	.16			.19		
10. Nonmobile			-.21		.13			.42	.22
11. Mobile-in	.15						-.18	-.37	-.19
12. Mobile-Out	-.13		.13			.12		-.16	
13. S.E.S.	-.46		-.30	.25	.16			.35	

Note: Only significant correlations are reported. Not all variables are listed along the horizontal axis.

$p < .05$

structure, nonmobility, and mobility-in-county. Family structure was correlated with race, socioeconomic status, nonmobility, and both categories of mobility. Sex was not found to correlate with any other moderator or independent variable.

In Table 4-12, it can be seen that mobility was related to the WPBIC, PRI, attendance, and reading. There was a relationship between the teacher ratings on the WPBIC and nonmobility and out-of-county mobility. The PRI scores were correlated with nonmobility. Attendance related to out-of-county mobility, and reading correlated with in-county mobility.

In order to investigate further, four Chi-square analyses were conducted. It was found that mobility was not associated with sex ($p < .88$). On the other hand, as seen in Tables 4-13, 4-14, and 4-15, mobility was strongly related to race, socioeconomic status, and family structure.

The data in Table 4-13 indicate that there was a large difference between the kinds of mobility and race. White mobile students were twice as likely as nonwhite students to have attended school outside of Alachua County.

When socioeconomic status and mobility were compared, it was concluded that lower socioeconomic status students are only half as likely to be nonmobile as higher socioeconomic status students (see Table 4-14). When higher socioeconomic status students had attended three or more schools, it was more likely that one of these schools was outside Alachua County.

Table 4-13

Chi-Square Analysis of Race and Mobility

	White		Nonwhite	
	n	%	n	%
Nonmobile	106	54.6	37	46.2
Mobile-in-County	26	32.0	28	35.0
Mobile-Out-of-County	62	32.0	15	18.8

χ^2 (2, 274) = 17.69
$p < .0001$

Table 4-14

Chi-Square Analysis of Socioeconomic Status and Mobility

	Lower Socioeconomic Status		Higher Socioeconomic Status	
	n	%	n	%
Nonmobile	38	37.6	105	60.7
Mobile-in-County	30	29.7	24	13.9
Mobile-Out-of-County	33	32.7	44	25.4

χ^2 (2, 274) = 15.8
$p < .0001$

Table 4-15

Chi-Square Analysis of Family Structure and Mobility

	Divorced, Separated, or Death of Parent		Intact	
	n	%	n	%
Nonmobile	34	28.3	106	70.2
Mobile-in-County	42	35.0	12	8.0
Mobile-Out-of-County	44	36.7	33	21.8

χ^2 (2, 271) = 52.4
$p < .0001$

The relationship between family structure and mobility is striking (see Table 4-15). Children from families which had experienced divorce, separation, or death of a parent were three times more likely to change schools than children from intact families. Those children from intact families who changed schools were much more likely to have attended an out-of-county school. Approximately 70% of the children who had experienced some sort of family dissolution had attended three or more schools, with about an equal distribution between in- and out-of-county schools.

Once this high intercorrelation between mobility and the moderator variables had been determined, five one-way analyses of variance calculations were undertaken to identify the influence, if any, of mobility on reading achievement, attendance, attitude about school, peer relationships, and school adjustment problems. Tables 4-16, 4-17, and 4-18 give the means of the nonmobile, mobile-in-county, and mobile-out-of-county students on the WPBIC, Battle, PRI, attendance, and reading measures. The results of the analyses of variance in the areas in which the means were significantly different (reading and school adjustment problems) appear in Tables 4-19 and 4-20.

The mean scaled score on the reading achievement test for nonmobile students (742.57, SD = 69.3) differed significantly from the mean score of the mobile-in-county students (709.24, SD = 80.07). The mean for the mobile-in-county students was significantly different from the mean of

Table 4-16

Total Nonmobile Student Group Means and Standard Deviations for the Walker Problem Behavior Identification Checklist, Battle Student Attitude Scale, Peer Relationship Inventory, Absences, and the Metropolitan Achievement Test

Variable	N	Mean	SD	Minimum	Maximum
WPBIC	143	6.26	8.26	0.0	37.0
Battle	141	127.31	18.53	77.0	166.0
PRI	141	104.21	15.65	60.0	135.0
Absences	143	5.50	5.10	0.0	30.0
MAT	143	742.57	69.30	551.0	927.0

Table 4-17

Total Mobile-in-County Student Group Means and Standard Deviations for the Walker Problem Behavior Identification Checklist, Battle Student Attitude Scale, Peer Relationship Inventory, Absences, and the Metropolitan Achievement Test

Variable	N	Mean	SD	Minimum	Maximum
WPBIC	54	10.46	12.56	0.0	58.0
Battle	52	122.35	17.78	89.0	157.0
PRI	53	100.08	15.92	71.0	138.0
Absences	54	5.69	5.54	0.0	25.0
MAT	51	709.24	80.07	554.0	927.0

Table 4-18

Total Mobile-Out-of-County Student Group Means and Standard Deviations for the Walker Problem Behavior Identification Checklist, Battle Student Attitude Scale, Peer Relationship Inventory, Absences, and the Metropolitan Achievement Test

Variable	N	Mean	SD	Minimum	Maximum
WPBIC	77	10.25	9.57	0.0	34.0
Battle	76	123.54	18.36	84.0	166.0
PRI	76	100.11	15.73	60.0	134.0
Absences	77	7.13	7.13	0.0	33.0
MAT	77	741.51	74.39	525.0	927.0

Table 4-19

ANOVA Summary Table for Reading Achievement and Mobility

Source	df	SS	MS	F
Mobility	2	45034.44	22517.22	4.24
Error	268	1423097.54	5310.07	
Total	270	1468131.99		

$p < .02$

Table 4-20

ANOVA Summary Table for School Adjustment Problems and Mobility

Source	df	SS	MS	F
Mobility	2	1137.98	568.99	5.99
Error	271	25757.16	95.04	
Total	273	26895.14		

$p < .003$

the out-of-county mobile students (741.51, SD = 74.39). The nonmobile and mobile-out-of-county students did not differ significantly in reading achievement.

The mean on the WPBIC for nonmobile students was 6.26 (SD = 8.26). This differs significantly ($p < .05$) from the means of the mobile-in-county students (10.46, SD = 12.56) and the out-of-county students (10.25, SD = 9.57). The means for both categories of mobile students were statistically similar.

CHAPTER V
SUMMARY, CONCLUSIONS, LIMITATIONS, IMPLICATIONS, AND RECOMMENDATIONS

Summary

The purpose of this study was to investigate the differences between mobile and nonmobile fifth-grade students in terms of reading achievement, school adjustment problems, peer relationships, school attendance, placement in exceptional student education classes, and attitude toward school.

School personnel and students at 13 of the 16 eligible elementary schools in Alachua County, Florida, participated in the study. The school counselor in each respective school generated a list of nonmobile students--those students who had attended only one elementary school--and mobile students--those who had attended three or more schools. Parent permission letters were sent to the families of 504 students. Of these, 54% or 274 were returned. This yielded a sample composed of 143 nonmobile and 131 mobile fifth-grade students.

The school counselor or designee gathered information on each participating student. Through a review of school records, data about race, sex, socioeconomic status, family structure, attendance, placement in exceptional student education, and reading achievement scores from the Metropolitan Achievement Test were obtained. The mobile students were classified into two categories--mobile-in-county (attendance at three or more schools in Alachua County)--and mobile-out-of-county (attendance at three schools with at least one located outside Alachua County).

The teachers rated each participating student in their respective classrooms on the Walker Problem Behavior Identification Checklist. This instrument is used to assess school adjustment problems.

In order to remove the effects of the moderator variables (race, socioeconomic status, sex, and family structure) from that of the main independent variable, student mobility, multiple analyses of regression were calculated for each dependent variable. The moderator variables were entered into the analyses first, saving mobility for last. These calculations showed that mobility alone was not a significant predictor of the dependent variables in every case but one. Mobility-out-of-county did add to the explanatory power of socioeconomic status in determining placement in gifted classes or classes for students with learning or behavior problems. If a student had attended a school outside Alachua County, there was found to be a significantly greater likelihood that the child would be placed in classes for learning or behavior problems rather than classes for gifted students.

The moderator variables were found to be significant predictors for all dependent variables except peer relationships. Through Pearson product moment correlations, Chi-square analyses, and one-way analyses of variance, it was found that mobile students differed significantly from nonmobile students in reading achievement and school adjustment problems. It was also determined that mobility correlated with all moderator variables except sex. Therefore, mobility and the moderator variables of race, family structure, and socioeconomic status shared in the explanation of variance. Since these variables are intertwined, the needs of the mobile student in terms of the dependent variables under consideration are real and must be understood as well as satisfied.

Conclusions

Reading Achievement

Through a multiple regression analysis, it was shown that the main independent variable, student mobility, did not add to the explanatory power of the four moderator variables (race, socioeconomic status, sex, and marital status of parents) in relation to reading achievement.

It can be concluded that race and socioeconomic status are significant predictors of reading achievement ($p < .001$). The estimated mean scaled score was 42 points higher on the reading subtest of the Metropolitan Achievement Test for white students than for nonwhite students. Similarly, the estimated mean scale score for higher socioeconomic status students was 43 points higher than for lower socioeconomic status students.

Mobility is highly correlated with race and socioeconomic status. Thus, when these effects are filtered out, mobility alone is not a significant predictor of reading score.

School Adjustment Problems

When the four moderator variables were entered into a multiple regression analysis first, holding the variable of student mobility until last, the relationship between school adjustment problems and mobility was not significant. Student mobility did not add to the explanatory power of the moderator variables.

On the other hand, three moderator variables were discovered to be significant predictors of the school adjustment problem score, as rated by teachers on the Walker Problem Behavior Identification Checklist (WPBIC). The estimated mean for nonwhite students was 2.8 points higher than for white students. The estimated mean for girls was 2.6 points lower than for boys. According to Walker (1970, 1976, 1983), the mean for fifth-grade girls is 4.47 (SD = 6.92). For fifth-grade boys, the mean is 12.63 (SD = 14.03). The combined mean for the normative sample is 7.76 (SD = 10.53). Girls are rated significantly lower than boys nationally ($p < .001$). The other significant predictor of teacher ratings on the WPBIC was socioeconomic status. The estimated mean rating for lower socioeconomic status students was 3.7 points higher than for higher socioeconomic status students ($p < .007$). Higher scores on the WPBIC indicate more school adjustment problems, as rated by teachers.

Race and socioeconomic status, two significant predictors of school adjustment problems, are correlated with mobility. The combination of these elements would assist school counselors and teachers in scheduling effective early intervention with targeted students.

Peer Relationships

Through multiple regression analysis, the moderator variables of race, socioeconomic status, sex, and marital status of parents, and the main independent variable, student mobility, were not found to be statistically significant in predicting peer relationships as measured by this instrument.

The Peer Relationship Inventory (PRI) was constructed by the investigator. The normative population consisted of 109 students in the fifth grade from a school not participating in the study. The mean score for this group was 102.84 (SD = 16.02). This instrument may not allow measurement of a critical element or elements of peer relationships. The PRI was correlated with nonmobility

($r = .13$, $p < .05$) as seen in Table 4-12. Future refining may yield more useful results.

Attendance

A significant model was formed when the variable of race, socioeconomic status, sex, marital status of parents, and mobility were entered into a regression to investigate their effects on school attendance. Mobility was not a significant predictor, however, once the effects of the moderator variables were removed.

The moderator variables of race and socioeconomic status were significant ($p < .03$, $p < .01$) predictors of the number of days absent. Both nonwhite and higher socioeconomic status students were absent two fewer days than white and lower socioeconomic status students.

However, the variance accounted for with these variables was only 6% (see Table 4-6). There are obviously many other factors involved in school attendance which were not investigated in this study.

Exceptional Student Education

Placement in exceptional student education classes was analyzed using three separate multiple regressions. The categories of SLD and EH were collapsed into one--placement in classes for students with learning or behavior problems. There were then three categories: regular education, gifted classes, and classes for learning or behavior problems. The null hypothesis concerning ESE was not rejected in the comparison between gifted classes and classes for students with learning or behavior problems. Out-of-county mobility did add to the explanatory power of the strongest predictor variable, socioeconomic status.

Significant moderator variables in the first two regression analyses were race, socioeconomic status, and sex. Mobility was related to race and socioeconomic status, so the interwoven nature of these variables is important.

Student Attitude About School

The moderator variables and mobility were, in general, predictors of students' attitudes toward school [$F(6, 261) = 5.57$, $p < .001$]. Mobility did not add to the explanatory power.

Race, sex, and socioeconomic status were significant predictors of attitude towards school ($p < .004$, $p < .03$, $p < .05$). Nonwhite students scored an estimated mean of eight points lower on the Battle Student Attitude Scale. Girls and higher socioeconomic status students scored an estimated mean of five points higher.

Race and socioeconomic status were correlated with mobility. The effects of these factors are likely to exist together in mobile students in relation to attitude towards school.

Limitations

This study was conducted in a small southern university community. Although the sample did not differ significantly from local or national norms in terms of the moderator or dependent variables, the results may not be generalizable to other cities or sections of the country. Alachua County has a highly mobile population as does all Florida. From the data available, only 33% of the fifth-grade students in Alachua County schools had attended the same school since first enrolling. The vast majority were children who had moved one or more times. Therefore, the impact of mobility on these students and their respective schools may not have been nearly as great as it might be on students and schools in an essentially nonmobile community.

White the total number of students in the sample was 274, the response rate from parents was only 54%. A greater return by eligible families would have been desirable to increase cell sizes for the analyses of variance. The selection of students in the sample is, perhaps, somewhat biased. In order for a child to participate, the child had to deliver the parent permission letter home, the parents had to read and sign it, and the child then returned the letter to school personnel. This process required student responsibility, student to parent communication, and parent time, effort, and interest. This could mean that the less organized students and families were underrepresented.

Although the effects of important moderator variables were controlled in this study, the recency of relocating and the reasons for moving were not studied. An attempt was made to gather data on the reasons for changing schools, but the information obtained was insufficient for analysis. Parents were asked to respond to the open-ended question "What was the main reason for moving?" (see Appendix A). Due to the varied nature and limited number of responses, coding was excessively difficult.

Implications and Recommendations

The findings of this study indicated that mobility is closely correlated with some student demographic factors which are related to achievement, attitudes, and adjustment. It would, therefore, be beneficial to design appropriate interventions for mobile students fitting those specific characteristics. For example, nonwhite, lower socioeconomic status males were, on the average, rated by teachers as having more school adjustment problems than other fifth-grade students. Mobility was related to race and socioeconomic status. School counselors and teachers could then create special orientation activities and group sessions aimed at helping these incoming boys adjust better to school expectations and experiences.

This study was conducted at the end of the fifth-grade year. All of the students, except one, had been at their present school for at least eight weeks. Perhaps there is a critical period of stress in the weeks immediately preceding and following a change of schools. If this is the case, timely contact from supportive school personnel would be helpful.

Improvements are needed in instruments measuring children's adjustment, attitudes, and peer relationships. Self-report inventories and rating instruments by significant adults do not seem to give the full picture of these important factors. The PRI needs further refining. More normative data would be beneficial.

Elementary counselors working in cooperation with administrators and teachers almost invariably provide special orientation programs for new students. This guidance intervention may play an important part in helping students adjust to school and achieve well. Perhaps an experimental study controlling for counseling effects would be helpful.

Mobile students, as shown in this study, do not necessarily fare more poorly in school than their nonmobile peers. Mobile children many times bring with them a new perspective, different experiences, and social skills developed out of necessity. Ways should be explored to capitalize on these valuable resources. New students and their families have much to offer a receptive school and community.

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APPENDIX A
LETTER TO PARENTS

May, 1986

Dear Parents,

I am a doctoral student in the Counselor Education Department at the University of Florida and the counselor at Terwilliger Elementary School.

There is a need to know more about the factors affecting the learning of children. We are organizing a study in which it will be possible to examine how different situations can affect the academic achievement and progress of students in school.

Your child's name was randomly drawn from a list of students. All information collected will be confidential. Students' names will not be used in the final analysis and the only requirement for the participation of your child is the completion of two general questionnaires. This will take about twenty minutes and will be done during free or nonacademic work time. Student records will be examined to gather information such as sex, race, reading achievement, and attendance. The information obtained will be used to help teachers, principals, and counselors find out how they can best assist students.

At any time that you or your child wish to withdraw, you may do so without penalty.If you would allow your child to help us in our study, please sign the permission slip below so that your child can fill out the questionnaires. Also, please answer the questions below for parents.

If you have any questions or concerns about this study or your child's participation in it, please call me at Terwilliger Elementary School (376-5057) or at home (376-7253).

Thank you,

Beth Dovell
Guidance Counselor
Terwilliger Elementary

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Beth Dovell's study on the factors affecting children's learning

1. My child has attended school in another state or county. ____yes____no

2. What was the main reason for moving? ____

____

____

I have read and I understand the procedure described above. I agree to have my child____________

________________________________, take part in this procedure and I have received a copy of

copy of this description.

signature of parent or guardian	date	2nd parent/witness	date

APPENDIX B
PEER RELATIONSHIP INVENTORY

Name______________________________

PEER RELATIONSHIP INVENTORY

DIRECTIONS: Circle the letter at the end of each sentence which stands for how you see yourself. Circle SA if you STRONGLY AGREE, circle A if you AGREE, U if you are UNSURE, D if you DISAGREE, and SD if you STRONGLY DISAGREE. There are no right or wrong answers.

STRONGLY AGREE AGREE UNSURE DISAGREE STRONGLY DISAGREE

1. Students like what I have to say.......................... SA.......... A..........U..........D..........SD

2. It is easy for me to talk with others................. SA.......... A..........U..........D..........SD

3. Other students are better liked than I am........SA.......... A..........U..........D..........SD

4. Other students like my ideas................................ SA.......... A..........U..........D..........SD

5. I let other students know when they have
done something I do not like..SA.......... A..........U..........D..........SD

6. Others think of me as a giving person................SA.......... A..........U..........D..........SD

7. Sharing is easy for me.. SA.......... A..........U..........D..........SD

8. I am popular with other students.........................SA.......... A..........U..........D..........SD

9. My classmates want me to be a leader on
teams or group projects.. SA.......... A..........U..........D..........SD

STRONGLY AGREE UNSURE DISAGREE STRONGLY
AGREE DISAGREE

10. I do not like to work with others in
groups..SA......... A.........U.........D..........SD

11. Other students know where I stand on
things..SA......... A.........U.........D..........SD

12. Others think I am sure of myself......................SA......... A.........U.........D..........SD

13. I do not fit in at school..SA......... A.........U.........D..........SD

14. I wish I had more friends....................................SA......... A.........U.........D..........SD

15. I talk over problems with others.......................SA.........A.........U.........D..........SD

16. I can get others to go along with
what I think..SA......... A.........U.........D..........SD

17. I am an important person to others..................SA......... A.........U.........D..........SD

18. I do not share my concerns with others......... SA......... A.........U.........D..........SD

19. I make friends easily.. SA......... A.........U.........D..........SD

20. I enjoy starting games with friends................ SA......... A.........U.........D..........SD

21. I do not belong to a group at school..................SA......... A.........U.........D..........SD

STRONGLY AGREE AGREE UNSURE DISAGREE STRONGLY DISAGREE

22. People think I am open-minded.......................... SA.......... A..........U.......... D.......... SD

23. I am a leader.. SA.......... A..........U.......... D.......... SD

24. I feel left out by others at school.....................SA.......... A..........U.......... D.......... SD

25. I like a lot of different types of people......... SA.......... A..........U.......... D.......... SD

26. I have a lot of friends...SA.......... A..........U.......... D.......... SD

27. I would rather back out of an argument
than say what I think.. SA.......... A..........U.......... D.......... SD

28. I am unsure of myself with others.................. SA.......... A..........U.......... D.......... SD

29. I like the way my classmates think
of me...SA.......... A..........U.......... D.......... SD

30. Other students enjoy doing things
with me... SA.......... A..........U.......... D.......... SD

BIOGRAPHICAL SKETCH

Beth Dovell was born in Gainesville, Florida, the daughter of Dr. and Mrs. J.E. Dovell. She graduated from Gainesville High School and received a Bachelor of Arts degree in psychology from the University of Florida in 1969. She earned her master's and specialist's degrees in counselor education in 1973 from the University of Florida. Since 1973, she has been the counselor at Myra Terwilliger Elementary School in Gainesville, Florida. Beth has made presentations at numerous local, state, and national conferences. She has served as a consultant on elementary guidance for several school systems and universities. She married Joe Hartman and they have a son, Brent Dovell Hartman.

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.

Robert D. Myrick

Robert D. Myrick, Chairman
Professor of Counselor
Education

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.

Paul W. Fitzgerald

Paul W. Fitzgerald
Professor of Counselor
Education

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.

James W. Longstreth

James W. Longstreth
Associate Professor of
Educational Leadership

This dissertation was submitted to the Graduate Faculty of the College of Education and to the Graduate School and was accepted as partial fulfillment of the requirements for the degree of Doctor of Philosophy.

August 1986

David C. Smith

Dean, College of Education

Dean, Graduate School